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Report No: PAD3617

INTERNATIONAL DEVELOPMENT ASSOCIATION

PROJECT APPRAISAL DOCUMENT

ON A

PROPOSED CREDIT

IN THE AMOUNT OF SDR138.9 MILLION  
(US\$200 MILLION EQUIVALENT)

TO THE

FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA

FOR AN

ETHIOPIA DIGITAL FOUNDATIONS PROJECT

March 24, 2021

Digital Development Global Practice  
Africa Eastern and Southern Region

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## CURRENCY EQUIVALENTS

(Exchange Rate Effective January 31, 2021)

Currency Unit = ETB

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US\$1 = ETB 39.48

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US\$1 = SDR 0.69

FISCAL YEAR

July 8 – July 7

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## ABBREVIATIONS AND ACRONYMS

AWPB	Annual Work Plan and Budget
B2C	Business to Commerce
BCC	Budget Call Circular
BYOA	Bring-Your-Own-Apps
BYOD	Bring-Your-Own-Devices
CAPEX	Capital Expenditure
CBA	Cost Benefit Analysis
CBE	Commercial Bank of Ethiopia
CERC	Contingent Emergency Response Component
CERT	Cybersecurity Emergency Response Team
ccTLD	Country-Code Top-Level Domain
COPCD	The Channel One Programs Coordinating Directorate
COVID-19	Coronavirus Disease 2019
CPF	Country Partnership Framework
CTE	Colleges of Teachers' Education
DBE	Development Bank of Ethiopia
DDP	Digital Development Partnership
DE4A	Digital Economy for Africa
DFIL	Disbursement and Financial Information Letter
DPF	Development Policy Financing
DSSI	Debt Service Suspension Initiative
ECA	Ethiopian Communications Authority
EFY	Ethiopian Financial Year
EMDTF	Ethiopia Multi-Donor Trust Fund
ERP	Enterprise Resource Planning
ESCP	Environmental and Social Commitment Plan
ESMF	Environmental and Social Management Framework
ESS	Environment and Social Standard
ETB	Ethiopian Birr
ETBAN	Ethiopian Business Angel Network
EthERNet	Ethiopian Education and Research Network
ethioCERT	Ethiopia Cybersecurity Emergency Response Team
EU	European Union
FGE	Federal Government of Ethiopia
FM	Financial Management
FMM	Financial Management Manual
FMS	Financial Management Specialist
GAVI	Global Alliance for Vaccines and Immunizations
GB	Gigabyte
GBV	Gender-Based Violence
GEM	Gender Empowerment Measure
GHG	Greenhouse Gas
GIF	Global Infrastructure Facility

GIL	Gender Innovation Lab
GDP	Gross Domestic Product
GNI	Gross National Income
GoE	Government of Ethiopia
GRM	Grievance Redress Mechanisms
GRS	Grievance Redress Service
GSMA	Global System for Mobile Communications Association
HCES	Household Consumption Expenditure Survey
HHI	Herfindahl-Hirschman Index
HoA	Horn of Africa
IBEX	Integrated Budget and Expenditures
ICT	Information and Communication Technologies
IDA	International Development Association
IDP	Internally-Displaced Person
IFAC	International Federation of Accountants
IFC	International Finance Corporation
IFMIS	Integrated Financial Management Information Systems
IFR	Interim Financial Report
IFWE	Ethiopia Financing Women Entrepreneurs
IMF	International Monetary Fund
INSA	Information Network Security Agency
IP	Intellectual Property
IPF	Investment Project Financing
IPSAS	International Public Sector Accounting Standards
IRU	Indefeasible Rights of Use
ISA	International Standards of Auditing
ISPs	Internet Service Providers
ITU	International Telecommunication Union
IXP	Internet Exchange Point
JET	Jobs and Economic Transformation
JCC	Jobs Creation Commission
KPI	Key Performance Indicator
LMP	Labor Management Procedure
M&E	Monitoring and Evaluation
MCIT	Ministry of Communication and Information Technology (former Ministry)
MDAs	Ministries, Departments and Agencies
MFD	Mobilizing Finance for Development
MGM	Matching Grants Manual
MInT	The Ministry of Innovation and Technology
MoE	Ministry of Education
MoF	Ministry of Finance
MoP	Ministry of Peace
MoSHE	Ministry of Science and Higher Education
MoST	Ministry of Science and Technology (former Ministry)
MoTI	Ministry of Trade and Industry
MSMEs	Micro, Small and Medium-Sized Enterprises

NBE	National Bank of Ethiopia
NREN	National Research and Education Network
OER	Open Educational Resources
OFAG	Office of the Federal Auditor General
OPEC	Organization of the Petroleum Exporting Countries
PAD	Project Appraisal Document
PCU	Program Coordinating Unit
PDO	Project Development Objective
PEC	Procurement Endorsing Committee
PEFA	Public Expenditure and Financial Accountability
PEHAA	Public Enterprises Holdings and Administration Agency
PFM	Public Financial Management
PforR	Program for Results
PIM	Project Implementation Manual
PIU	Project Implementation Unit
PoP	Point of Presence
PPA	Performance and Policy Actions
PPA	Project Preparation Advance
PPE	Personal Protective Equipment
PPIAF	Public Private Infrastructure Advisory Facility
PPSD	Project Procurement Strategy for Development
PSC	Project Steering Committee
PSNP	Productive Safety Net Program
RFP	Request for Proposals
RPF	Resettlement Policy Framework
SA	Social Assessment
SCD	Systematic Country Diagnostics
SEA	Sexual Exploitation and Abuse
SEP	Stakeholder Engagement Plan
SIM	Subscriber Identification Module
SMEs	Small and Medium-sized Enterprises
SMS	Short Message Service
SNNPR	Southern Nations Nationalities and People's Region (of Ethiopia)
SOE	State Owned Enterprise
SSA	Sub-Saharan Africa
STEM	Science, Technology Engineering and Math
STEP	Systematic Tracking of Exchanges in Procurement
TA	Technical Assistance
TC	Technical Committee
TOR	Terms of Reference
TVET	Technical and Vocational Education and Training
UN	United Nations
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
UNIDO	United Nations Industrial Development Organization
UPSNJP	Urban Productive Safety Net and Jobs Project

USF	Universal Service Fund
WASH	Water Sanitation and Hygiene
WB	World Bank
WBG	World Bank Group
WDR	World Development Report
WEF	World Economic Forum
WELCOM	Welfare and Competition



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DATASHEET

**BASIC INFORMATION**

Country(ies)	Project Name	
Ethiopia	Ethiopia Digital Foundations Project	
Project ID	Financing Instrument	Environmental and Social Risk Classification
P171034	Investment Project Financing	Moderate

**Financing & Implementation Modalities**

<input type="checkbox"/> Multiphase Programmatic Approach (MPA)	<input checked="" type="checkbox"/> Contingent Emergency Response Component (CERC)
<input type="checkbox"/> Series of Projects (SOP)	<input type="checkbox"/> Fragile State(s)
<input type="checkbox"/> Performance-Based Conditions (PBCs)	<input type="checkbox"/> Small State(s)
<input type="checkbox"/> Financial Intermediaries (FI)	<input type="checkbox"/> Fragile within a non-fragile Country
<input type="checkbox"/> Project-Based Guarantee	<input type="checkbox"/> Conflict
<input type="checkbox"/> Deferred Drawdown	<input type="checkbox"/> Responding to Natural or Man-made Disaster
<input type="checkbox"/> Alternate Procurement Arrangements (APA)	<input type="checkbox"/> Hands-on Enhanced Implementation Support (HEIS)

Expected Approval Date	Expected Closing Date
21-Apr-2021	30-Oct-2026
Bank/IFC Collaboration	Joint Level
Yes	Complementary or Interdependent project requiring active coordination

**Proposed Development Objective(s)**

The Project Development Objective is to increase the inclusiveness and affordability of digital services and digital job creation in Ethiopia.



**Components**

Component Name	Cost (US\$, millions)
1. Digital economy, enabling legal and regulatory environment	20.00
2. Digital government and connectivity	133.00
3. Digital business and entrepreneurship	40.00
4. Project management	7.00
5. Contingent Emergency Response Component	0.00

**Organizations**

Borrower: Federal Democratic Republic of Ethiopia

Implementing Agency: Ministry of Innovation and Technology (MInT)  
Ministry of Finance and Economic Development

**PROJECT FINANCING DATA (US\$, Millions)**

**SUMMARY**

<b>Total Project Cost</b>	200.00
<b>Total Financing</b>	200.00
<b>of which IBRD/IDA</b>	200.00
<b>Financing Gap</b>	0.00

**DETAILS**

**World Bank Group Financing**

International Development Association (IDA)	200.00
IDA Credit	200.00

**IDA Resources (in US\$, Millions)**

	Credit Amount	Grant Amount	Guarantee Amount	Total Amount



<b>Ethiopia</b>	200.00	0.00	0.00	200.00
National PBA	200.00	0.00	0.00	200.00
<b>Total</b>	<b>200.00</b>	<b>0.00</b>	<b>0.00</b>	<b>200.00</b>

**Expected Disbursements (in US\$, Millions)**

WB Fiscal Year	2021	2022	2023	2024	2025	2026	2027
Annual	4.00	30.00	30.00	30.00	50.00	30.00	26.00
Cumulative	4.00	34.00	64.00	94.00	144.00	174.00	200.00

**INSTITUTIONAL DATA**

**Practice Area (Lead)**

Digital Development

**Contributing Practice Areas**

Education, Finance, Competitiveness and Innovation

**Climate Change and Disaster Screening**

This operation has been screened for short and long-term climate change and disaster risks

**SYSTEMATIC OPERATIONS RISK-RATING TOOL (SORT)**

Risk Category	Rating
1. Political and Governance	● High
2. Macroeconomic	● Substantial
3. Sector Strategies and Policies	● High
4. Technical Design of Project or Program	● Moderate
5. Institutional Capacity for Implementation and Sustainability	● Substantial
6. Fiduciary	● Substantial
7. Environment and Social	● Moderate
8. Stakeholders	● Moderate



9. Other	● Substantial
10. Overall	● High

**COMPLIANCE**

**Policy**

Does the project depart from the CPF in content or in other significant respects?

Yes  No

Does the project require any waivers of Bank policies?

Yes  No

**Environmental and Social Standards Relevance Given its Context at the Time of Appraisal**

E & S Standards	Relevance
Assessment and Management of Environmental and Social Risks and Impacts	Relevant
Stakeholder Engagement and Information Disclosure	Relevant
Labor and Working Conditions	Relevant
Resource Efficiency and Pollution Prevention and Management	Relevant
Community Health and Safety	Relevant
Land Acquisition, Restrictions on Land Use and Involuntary Resettlement	Relevant
Biodiversity Conservation and Sustainable Management of Living Natural Resources	Relevant
Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities	Relevant
Cultural Heritage	Relevant
Financial Intermediaries	Not Currently Relevant



**NOTE:** For further information regarding the World Bank’s due diligence assessment of the Project’s potential environmental and social risks and impacts, please refer to the Project’s Appraisal Environmental and Social Review Summary (ESRS).

**Legal Covenants**

Sections and Description

Coordination Agreement: 1. To facilitate the carrying out of the Part A.2 of the Project, the Recipient shall not later than thirty (30) days after the Effective Date, through MInT, enter into a coordination agreement with Ethiopian Communication Authority (ECA), under terms and conditions approved by the Association (“Coordination Agreement”). 2.Except as the Association shall otherwise agree, the Recipient shall not assign, amend, abrogate or waive the Coordination Agreement or any of its provisions.3.The Recipient shall maintain, at all times during the implementation of the Project, a Project focal point and accountant within the ECA, inter alia, to provide technical support to the PIU in the implementation and management of Part A.2 of the Project.

Sections and Description

Establishment of the Grievance Redress Mechanism: The Recipient shall, not later than sixty (60) days of the Effective Date, establish, operationalize, and thereafter, maintain throughout Project implementation, a grievance mechanism, in form and substance satisfactory to the Association.

**Conditions**

Type	Description
Effectiveness	ARTICLE V, section 5.01. (a) from the Financing Agreement: The Recipient has prepared and adopted, or caused to be prepared and adopted, a Project Implementation Manual, in form and substance satisfactory to the Association.
Effectiveness	ARTICLE V, section 5.01. (b) from the Financing Agreement: The Recipient has established the Project Implementation Unit (PIU), in form and substance satisfactory to the Association, and said PIU is fully staffed with technical staff, satisfactory to the Association, including the Project Coordinator, a procurement officer, a financial officer or an accountant, and an environmental and social management officer, all recruited in accordance with the provisions of the Procurement Regulations.
Disbursement	Section III, B. 1. (b) from the Financing Agreement: No withdrawal shall be made for payments made under Category (2) unless the Recipient has prepared and adopted the Matching Grants Manual, and a policy relating to the implementation of Matching Grant program, in form and substance satisfactory to the Association.



Type	Description
Disbursement	<p>Section III, B. 1. (c) from the Financing Agreement:</p> <p>No withdrawal shall be made for payments made for Emergency Expenditures under Category (4), unless all the following conditions have been met in respect of said expenditures:</p> <p>(i) (A) the Recipient has determined that an Eligible Crisis or Emergency has occurred, and has furnished to the Association a request to withdraw Financing amounts under Category (4); and (B) the Association has agreed with such determination, accepted said request and notified the Recipient thereof; and</p> <p>(ii) the Recipient has adopted the CERC Manual and Emergency Action Plan, in form and substance acceptable to the Association.</p>

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## I. STRATEGIC CONTEXT

### A. Country Context

- 1. Ethiopia, a growing economy with a population of over 100 million located in the conflict-affected Horn of Africa (HoA)<sup>1</sup> region, is experiencing unprecedented political and economic change.** Since the appointment of a new Prime Minister in April 2018, the new administration started the implementation of a range of economic reforms designed to revitalize the Ethiopian economy by expanding the role of the private sector. Given Ethiopia's size and location, these shifts have the potential to transform the economic and political landscape in the HoA, though the situation in the region remains fragile.
- 2. The Homegrown Economic Reform agenda, launched in September 2019, outlines macroeconomic, structural, and sectoral reforms for job creation, poverty reduction, and inclusive growth.** While the Government of Ethiopia (GoE) sets out on its vision to transform Ethiopia from a largely agrarian low-income country to an industrialized lower-middle-income country by 2030, the initiative gives special emphasis to sectors such as agriculture, manufacturing, mining, tourism, and information and communication technology (ICT). The GoE has also initiated reforms characterized by market liberalization—opening the private sector for competition and foreign participation with partial and/or full privatization of selected state-owned enterprises (SOEs) planned in key strategic sectors, including telecommunications, energy, aviation, and logistics. The implementation of these reforms is expected to transform the economy toward a more sustainable model by strengthening the role of the private sector, enhancing the efficiency of the industry, contributing to export expansion, and spurring competition in several critical sectors. Although Ethiopia's strong economic growth has been driven by large-scale public investment in infrastructure, the country was experiencing the limitations of the state-led development model, as evidenced by slowing gross domestic product (GDP) growth, the crowding out of the private sector, and financial sector vulnerabilities exacerbated by the continued expansion of SOE debt. The high domestic inflation and continuing foreign exchange shortages have also pushed the GoE to adopt a comprehensive structural reform program which has the potential to boost the economy.
- 3. The country has been one of the world's fastest-growing economies over the past 10 years, making important strides in poverty reduction; but further progress is required.** GDP grew at an average annual rate of approximately 10 percent between 2007 and 2019, which translated into substantial poverty reduction, with the share of the population living in extreme poverty decreasing from 37 percent in 2005 to 23.5 percent in 2016 (Ethiopia Household Consumption Expenditure Survey, [HCES]). Human development outcomes also improved from a low base. For example, between 2011 and 2016, the net primary school enrollment rate increased from 64 percent to 74 percent, under-five mortality decreased from 88 per 1,000 live births to 67, and the number of people with access to an improved water source increased from 54 percent to 65 percent.<sup>2</sup> Average life expectancy has increased by about one year annually since 2000 and is now higher than the averages for both Sub-Saharan Africa (SSA) and low-income countries worldwide. However, despite the progress made, Ethiopia remains among the world's poorest countries, with an annual per capita income of US\$740 in 2017, and with low human

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<sup>1</sup> As of 2019, Ethiopia's rural population still constituted 78.8 percent of the total, despite a consistent trend towards rural to urban migration.

<sup>2</sup> Source: Demographic and Health Survey, 2011; 2016; Welfare Monitoring Survey, 2011;2016.



development, as reflected in a score of 0.38 on the World Bank's (WB) Human Capital Index. Moreover, with a forecast 2.3 percent annual net increase, Ethiopia's large population of around 108 million (2018) makes it the second most populous nation in Africa, after Nigeria, requiring strong growth in labor market demand to keep up with the increasing labor supply.

- 4. In terms of climate change, Ethiopia is vulnerable to frequent irregularities and variability in climate patterns while its adaptive capacity is low.** In particular, increased variability in rainfall has been observed with the persistence of extremes, for example, heavy rainfall causing floods in urban areas such as Addis Ababa, and drought in several regions. Large-scale floods occur mostly in the lowland areas, while flash floods resulting from intense rainfall events occur mostly in the highlands. The capital, Addis Ababa, experiences annual flood events, which pose a significant threat to urban infrastructure. Frequent floods are also expected to increase incidences of malaria in the highlands, though it has not been endemic so far. At the same time, over the past three decades, Ethiopia has experienced many localized drought events and seven major droughts. Meteorological records also show that mean annual temperatures have increased by 1°C since 1960, with a marked increase in the number of hot days and a decline in the number of cold days.<sup>3</sup> The great variance in the weather and rainfall also increases the risks of wildfire and an expansion of the wildfire hazard zones.
- 5. The situation in Tigray remains volatile.** The Ethiopian government declared a state of emergency for the Tigray Region on November 4, 2020 and Ethiopian Defense Forces captured the region's capital on November 29, 2020. Communication with Tigray remains limited, hampering the availability of reliable information. The United Nations (UN) has reported that 2.3 million persons are in need of humanitarian assistance and over 50,000 refugees have fled from Tigray to neighboring Sudan. There are also reports of the destruction of major infrastructure. The Federal Government has appointed an interim administration for the Tigray region and announced its intent to rebuild and provide social services in the region. World Bank Group (WBG)-financed activities in Tigray Region have been paused. Ongoing and planned WBG-financed activities in the region would resume as soon as circumstances permit, with an expectation of compensating for the period where implementation has been effectively paused. The fast-changing situation on the ground is being monitored closely to inform dialogue with the authorities on when and how resumption of WBG-financed activities can occur.
- 6. Gender disparities are profound, as signaled by the low economic, educational, and empowerment status of women in the country.** There is a long history of gender inequality in Ethiopia, with poorer women and girls especially facing multiple disadvantages. Women experience higher rates of unemployment than men (by 6.5 percent<sup>4</sup>), seasonal employment (by 37 percent), and temporary employment (by 13 percent), with these rates increasing as a result of Coronavirus disease 2019 (COVID-19).<sup>5</sup> Women lag men by 79 percent in terms of business sales, and by 44 percent in hourly wages.<sup>6</sup> This is partly attributable to unequal access of men and women to education and vocational training as well as to labor markets. In entrepreneurship, women tend to work fewer

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<sup>3</sup> World Bank Group. Climate Change Knowledge Portal: Ethiopia.

<https://climateknowledgeportal.worldbank.org/country/ethiopia/climate-data-historical>.

<sup>4</sup> Latest available data is from the 2013 Labor Force Survey.

<sup>5</sup> FAO (Food and Agriculture Organization of the United Nations). 2019. *Ethiopia: National Gender Profile of Agriculture and Rural Livelihoods*. <http://www.fao.org/3/ca3224en/ca3224en.pdf>

<sup>6</sup> Buehren, Niklas; Paula Gonzalez, Amy Copley. 2019. *What Are the Economic Costs of Gender Gaps in Ethiopia? Gender Innovation Policy Initiative*. World Bank, Washington, DC: World Bank. <https://openknowledge.worldbank.org/handle/10986/31441>.



hours than men, hire labor less frequently, use less credit, and are less likely to have a business license contributing to the gender gap in business sales. The COVID-19 pandemic is expected to have a lasting impact on female-owned businesses, with 40 percent of them already temporarily or permanently closed as of June 2020.<sup>7</sup> According to the United Nations Development Programme's (UNDP) Gender Empowerment Measure (GEM), females and males held 27 percent and 73 percent, respectively, of positions for legislators, senior officials, and managers in Ethiopia, ranking the country 80th place out of 145 countries with a score of 0.36. For the professional and technical positions, 33 percent and 67 percent were held by females and males, respectively.

- 7. The global COVID-19 outbreak is expected to have a negative impact on Ethiopia's economy and exacerbate existing socioeconomic challenges.** Ethiopia was several weeks behind other countries in terms of this pandemic, with the first COVID-19 related death reported on March 31, 2020, but by December 30, 2020, this had increased to 1,918. The WB predicts that economic growth in SSA will decline from 2.4 percent in 2019 to as low as -5.1 percent in 2020, bringing the first recession in 25 years.<sup>8</sup> While the specific effects of the pandemic-driven global economic downturn and its impact on Ethiopia's economy are difficult to predict, it is likely to exacerbate many of the socioeconomic challenges that existed before the pandemic. The population in slums and areas with a high concentration of refugees and internally displaced persons (IDPs), in particular, faces challenges in terms of housing and basic services, relying on community water pumps which can be a major vulnerability for community spreading of COVID-19. Overcrowding in these areas, together with a strong reliance on the informal economy, also pose additional challenges to social distancing measures. The state of emergency, declared in Tigray region in November 2020, and the economic crisis may have the potential to increase the risks of domestic violence. The external sector will likely face a major economic shock in the context of the pandemic, especially with the decline in exports.

## B. Sectoral and Institutional Context

- 8. Ethiopia was one of the last three countries in the world (along with Eritrea and Djibouti) to retain a national telecom monopoly on all telecommunications services until the Communication Services Proclamation, adopted in September 2019, which creates the basis for market liberalization.** This late start is one reason why the country lags in key digital indicators compared to its peers. In a country of more than 100 million people where 40 percent are aged under 15, internet use/access was a meager 18.6 percent at the end of 2017.<sup>9</sup> By comparison, internet usage in Sudan stood at 30 percent as of the same date. Mobile phone use and ownership in Ethiopia, at around 44 percent in mid-2020, is significantly behind that of Nigeria (93 percent), Kenya (102 percent) and Sudan (74 percent), though this is in part due to the low level of multiple subscriber identification module (SIM) card ownership in the country compared with countries with multiple operators. The gaps are amplified when examining the uptake of mobile broadband services (See table 1 in annex 3 of the Project Appraisal Document (PAD)).

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<sup>7</sup> The Gender Innovation Policy Initiative for Ethiopia (GIPIE), *The impacts of COVID-19 on women-owned enterprises in Ethiopia: Finding from a high-frequency phone survey*, July 2020.

<sup>8</sup> World Bank (2020) *Africa's Pulse Vol. 21: An analysis of issues facing Africa's Economic Future*.

<sup>9</sup> International Telecommunication Union (ITU), World Telecommunication/ICT Indicators Database. No data are currently available on the breakdown between male and female internet users from ITU.



9. **The digital divide within Ethiopia is equally apparent as the disparities with its neighbors.** 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. While there is little information about women’s broadband access and use, one study suggests that fewer than 12 percent of women have internet access in Ethiopia.<sup>10</sup> Considering the disparities that exist in literacy rates between women and men, rural and urban areas, poor and rich, non-graduates and graduates, the discrepancy is greater for the acquisition of digital skills, which require a basic level of literacy.
10. **The lack of digitization is exemplified by the education sector,** one of the areas of focus for this project. Historically, the Ministry of Education (MoE) has relied on a satellite-based system to deliver video content materials to schools. But the system is slow, expensive, and non-interactive and relies on analog video playback. The MoE has selected about 300 schools to be part of a future *Digital Smart Schools* program, but even they would benefit from only up to 2 Mbit/s of network capability per school, which is well below the minimum level of bandwidth that would be necessary to meet the recommended data consumption target for foundational digital activities (600 MB per month per individual<sup>11</sup>). Upgrading this network will help, but there is also a need to expand its coverage as it currently covers fewer than 10 percent of the total number of secondary schools. Universities are somewhat better off, but even so, the Ethiopian Education and Research Network (EthERNet) only connects about 36 out of 200 plus universities, colleges of teachers’ education (CTE) and research institutions, and just 25 of the roughly 1,500 technical and vocational education and training institutions (TVETs).
11. **With support from the WBG, a series of policy measures to liberalize the telecom sector were approved by the council of ministers in September 2018** and committed the government to: a) reform the market structure by the passage of a new law governing the communication sector; b) implement a functional (accounting) separation of Ethio Telecom, the incumbent operator, into infrastructure and services arms, so as to better facilitate competitive market entry through transparent wholesale prices; c) partially privatize Ethio Telecom; and d) institute market liberalization, which the GoE hopes to complete by mid-2021. Two new full service telecom licenses will initially be awarded, accompanied later by other class licenses, notably for wholesale fiber network providers and data center operators.
12. **With the promulgation of the *Communications Services Proclamation*, which creates the basis for a liberalized telecommunications market and private sector participation, a transparent regulatory regime has been introduced in Ethiopia.** The Proclamation<sup>12</sup> establishes the separation of policy, regulatory and operational functions that were formerly all performed by the government. The Ministry of Innovation and Technology (MINT) is charged with developing policy instruments, designing various programs, mobilizing resources, and guiding and monitoring implementation thereof for the development of the country’s telecom sector. The Ethiopian Communications Authority (ECA), created through the Proclamation, has been given a substantial role in regulating an increasingly competitive sector. Finally, Ethio Telecom was separated from the government, in preparation for its partial privatization. To implement other aspects of the Proclamation, the GoE has requested<sup>13</sup>

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<sup>11</sup> World Bank. 2021. *Minimum Data Consumption: How Much is Needed to Support Fundamental Online Activities*. WDR-21 background paper.

<sup>12</sup> <https://eca.et/2019/10/01/communications-service-proclamation/>.

<sup>13</sup> Request received on August 29, 2019.



transaction support from the International Finance Corporation (IFC) for the competitive award of two new full-service telecom licenses, with financing from the Global Infrastructure Facility (GIF). The GoE also requested<sup>14</sup> the WBG's support for telecoms sector deregulation, and fostering the emergence of a vibrant, inclusive and safe digital economy in Ethiopia.

- 13. To compete effectively in the digital age, Ethiopia must catch up with its peers.** To do that, the country will need to first strengthen its 'analog foundations' to support the digital economy<sup>15</sup>, notably the laws and regulations that shape the digital ecosystem, as well as the capacity of senior government officials tasked with designing, implementing and evaluating these. A proven recipe is to introduce market competition, increase private sector participation and ensure independent sector regulation; policies which are the focus of component 1 of this project. The opening of the telecoms market will provide a platform for network growth and expansion, and for the provision of enhanced digital services for government and education, which are supported under component 2. Market liberalization will also create a new opportunity for digital entrepreneurship to flourish and for new jobs to be created in the digital sector, in complement to the support under component 3.
  
- 14. To build a pipeline of digital entrepreneurs<sup>16</sup> and nurture viable digital business models, Ethiopia has to address barriers, including:** the availability and reliability of digital infrastructure, digital payments and identity document (ID) systems; nascent private sector participation in providing supporting infrastructure to entrepreneurs (for example, quality incubation programs); lack of digital economy and business skills; lack of access to finance, cultural and behavioral taboos around failure, and regulatory issues<sup>17</sup>. The general business environment is also weak, as Ethiopia ranks 159 out of 190 economies in the WBG's *Doing Business* rankings (2020).<sup>18</sup> 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. In addition, there is inadequate protection of intellectual property rights<sup>19</sup> Technology hubs and incubation centers in Ethiopia can help in overcoming barriers

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<sup>14</sup> Request received for the Digital Ethiopia Project on May 2, 2019, and a project preparation advance (PPA) signed on October 22, 2019.

<sup>15</sup> World Bank. 2016. *World Development Report: Digital Dividends*.

<sup>16</sup> Digital entrepreneurship can be defined as 'new ventures and the transformation of existing business by creating and using novel digital technologies'. Digital Enterprises are characterized by a high intensity of utilization of new digital technologies (particularly social, mobile, analytics and cloud solutions) to improve business operations, invent new (digital) business models, sharpen business intelligence, and engage with customers and stakeholders through new (digital) channels' (Adapted from <https://ec.europa.eu/docsroom/documents/5313/attachments/1/translations/en/renditions/native>).

<sup>17</sup> Ethiopia has in place some relevant regulations such as eTransactions, Freedom of the Mass Media and the Access to Information Proclamations. In April 2020, the National Bank of Ethiopia (NBE) issued a long-awaited directive titled "*Licensing and Authorization of Payment Instrument Issuer Directive No ONPS/01/2020*" that will regulate payment instruments issuers which includes mobile money, wallet and similar digital financial services in Ethiopia. However, it contains significant foreign ownership restrictions that are likely to limit market interest. The Jobs Creation Commission (JCC) is reported to have finalized a draft of a startup proclamation. Similarly, MInT is reported to have finalized drafting the Data Protection Proclamation, with both documents currently undergoing technical review.

<sup>18</sup> <https://openknowledge.worldbank.org/bitstream/handle/10986/32436/9781464814402.pdf?sequence=24&isAllowed=y>

<sup>19</sup> For example, government contracts that procure software solutions or customization from local firms require that the winning bidder submits the source codes to the procuring agency at the time of procurement and the bidders would automatically lose their intellectual property (IP).



to digital entrepreneurship, but their operations are largely unsustainable, being heavily dependent on donor funding, and very few digital start-ups that have graduated from those centers are operating successfully.

- 15. The GoE recognizes that the job creation potential of improved digitization can diffuse to the population through digital businesses in Ethiopia.** The latest draft of the National Plan for *Job Creation* from the Job Creation Commission (JCC) under the Prime Minister’s office shows that Ethiopia counted 78,000 ICT jobs in 2018. It further predicts that by 2025, there will be 24,000 new direct ICT and 242,000 indirect ICT-enabled jobs added. This translates to a total of 344,000 ICT or ICT-enabled jobs by 2025 - almost a five-fold increase. To this end, MInT published a framework for digital transformation, identifying digital entrepreneurship as a key pillar. In addition, the Ministry of Trade and Industry (MoTI), with support from the United Nations Conference on Trade and Development (UNCTAD) and the United Nations Industrial Development Organization (UNIDO), prepared the 2020-2025 National Entrepreneurship Strategy for Ethiopia.
- 16. Ethiopia will need to strengthen the security of its online ‘trust’ environment, supported by enhanced operational cybersecurity capabilities.** Increasing investments in the digital economy and the ever-growing reliance on digital infrastructure and solutions have made the economy more vulnerable to cyber threats. Ethiopia’s Information Network Security Agency (INSA) and its national Cybersecurity Emergency Response Team (ethioCERT) are mandated to protect the country from cyberattacks; the INSA reported that the country was subject to 1,078 attacks in the 2019/20 FY, of which 787 were resolved.<sup>20</sup> However, a 2018 study of three critical infrastructures -- Ethio Telecom, Ethiopian Electric Power and Ethiopian Electric Utility, found that they are inadequately prepared to detect, prevent and respond to threats, be they delivered via email, social media, criminal threats, by nation states or insider threats. Overall, attacks via email were found to be a growing trend in Ethiopia, with attacks via mobile computing, social media, new application development and implementation, and employees’ bring-your-own-devices (BYOD) or bring-your-own-apps (BYOA) on the rise. A related challenge was the loss of confidential data.<sup>21</sup> Ethiopia has the opportunity to strengthen its cybersecurity governance, deepen its technical and operational capabilities and implement a robust capacity building program to meet these challenges.
- 17. Access to affordable and high-quality internet services will be critical to ensure business continuity during and after the COVID-19 pandemic.** As social distancing and stay-at-home measures are enforced, and the government, businesses and schools increasingly rely on remote communications, it will be critical to ensure resilience of internet networks. Countries experiencing a surge in demand for internet traffic are developing ways to manage this situation, such as traffic prioritization, so that socioeconomic activities can continue during the pandemic. Even after the COVID-19 pandemic subsides, economic recovery may take several years. Hence, as in other countries, Ethiopia should take this opportunity to accelerate the transition to a digital way of doing things, to ensure business continuity and economic resilience for this and future emergencies.

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<sup>20</sup> <https://ethiopianmonitor.com/2020/08/24/insa-thwarts-787-cyber-attacks-on-ethiopia-in-2019-20-fy/>.

<sup>21</sup> Getaneh, Tewodros. 2018. *Cybersecurity Practices and Challenges at Selected Critical Infrastructures In Ethiopia: Towards Tailoring a Cybersecurity Framework*, PhD Thesis, Addis Ababa University.



### C. Relevance to Higher Level Objectives

18. **The proposed project is in line with the main objectives of the Ethiopia Country Partnership Framework (CPF) FY18 - FY22 (Report No. 115135-ET)<sup>22</sup>**, which are to support a spatially inclusive approach to development and to provide quality services to all areas. Digital connectivity and digital industries will provide game-changing opportunities to advance spatially inclusive development in Ethiopia. The proposed project will also support CPF objective 1.4, to increase investment in secondary cities and transport corridors, to create market access for farmers and employment opportunities. The project will also assist the country in managing a digital response to the COVID-19 pandemic, in particular contributing to pillar 4 of the WBG crisis response on strengthening policies, institutions and investments for building back better<sup>23</sup> (see annex 6). The project design has been adapted in response to the challenges presented by the pandemic, notably in sub-component 2.1 (Digital government and COVID-19 response).
19. **The proposed project will also fully leverage the Maximizing Finance for Development (MFD) approach**, in particular through support of the liberalization of the telecom sector and by attracting private, foreign investment for network expansion. This is in-line with CPF objective 1.5, to promote new approaches to sustainable infrastructure financing and debt management. Through the parallel efforts of the IFC, the proposed project would support the GoE in increasing private participation into the broader digital economy and promoting Ethiopia's competitiveness. The IFC and the WB are working closely together in Ethiopia, which is amongst the priority countries of the WBG's Digital Infrastructure Initiative.
20. The proposed project will contribute to the operationalization in Ethiopia of the WBG's **Digital Economy for Africa (DE4A) initiative<sup>24</sup>** and the African Union's **digital transformation strategy for Africa**, adopted in February 2020<sup>25</sup>. The strategy sets out a bold vision: to ensure that every African individual, business and government is digitally enabled by 2030. The goal is to drive the digital transformation of Africa and ensure its full participation in the global digital economy. The proposed project is in line with these objectives as it takes a comprehensive approach, covering connectivity, digital businesses and entrepreneurship. At the national level, **Digital Ethiopia 2025: A Digital Strategy for Ethiopia's Inclusive Prosperity**, published by the MInT in 2020, sets out four pathways to development which are closely aligned with the goals of this project.
21. The proposed project will also contribute to the **Jobs and Economic Transformation (JET) agenda** by supporting disadvantaged groups to adopt digital technologies and participate in the so-called 'platform economy' (for example, accommodation sharing, ride sharing, and other gig-economy services). It will also help by financing digital entrepreneurs and incentivizing digital businesses to onboard more people to participate in the digital economy, for instance as suppliers for e-commerce platforms. The project will thereby contribute to meeting the IDA19 digital policy commitments (see annex 5) and facilitating the development objectives of many other projects in the WBG's portfolio in Ethiopia, as illustrated in table 1 of annex 2.

<sup>22</sup> <https://openknowledge.worldbank.org/bitstream/handle/10986/27569/Ethiopia-Country-Partnership-Framework-June-5-2017-FINAL-06052017.pdf?sequence=1&isAllowed=y>.

<sup>23</sup> World Bank Group. 2020. *Saving Lives, Scaling up Impact and Getting Back on Track: WBG COVID-19 crisis response approach paper*. <http://documents1.worldbank.org/curated/en/136631594937150795/pdf/World-Bank-Group-COVID-19-Crisis-Response-Approach-Paper-Saving-Lives-Scaling-up-Impact-and-Getting-Back-on-Track.pdf>

<sup>24</sup> <https://www.worldbank.org/en/programs/all-africa-digital-transformation/ambition>.

<sup>25</sup> <https://au.int/en/documents/20200518/digital-transformation-strategy-africa-2020-2030>.



22. **The proposed project seeks to start addressing the gender digital divide by empowering women**, including through increased access to the internet, including at higher educational institutions, vocational training institutions and government institutions, and through inclusive and targeted investments in digital businesses – benefiting women entrepreneurs as well as women in the analog economy who benefit from training and digital device offered by digital businesses. The project thereby directly supports key IDA19 gender policy commitments (see annex 5) and will track relevant indicators, including the number of women with increased access to broadband internet, using digital services and accessing government technology (GovTech) solutions.

## II. PROJECT DESCRIPTION

### A. Project Development Objective

#### PDO Statement

The Project Development Objective (PDO) is to increase the inclusiveness and affordability of digital services and digital job creation in Ethiopia.

#### PDO Level Indicators

23. **The achievement of the PDO could be measured by the results indicators below:**

- (a) *Digital inclusiveness*: Internet penetration rate of internet users (fixed and/or mobile) per 100 inhabitants, disaggregated by gender (Number)
- (b) *Digital affordability*: Broadband internet prices per month, mobile, as measured by the cost of a Gigabyte (GB) of data, in US\$ and as a percentage of Ethiopia's GNI per capita.
- (c) *Digital job creation*: Increase in the number of jobs created, facilitated or sustained by digital businesses under the project, of which percentage female; percentage disabled and percentage rural.

### B. Project Components

24. **The Ethiopia Digital Foundations Project is intended to lay the building blocks to develop Ethiopia's digital economy.** Liberalization and the introduction of competition in the telecom sector, coupled with improved private management of the incumbent, has proven to deliver consistent results for improved access and affordability across the world. Building on this premise, this project will support the necessary steps to introduce market competition, private sector participation, foreign investment and independent sector regulation (component 1). The project will also help the country expand and strengthen its basic digital infrastructure, especially the fiber network and mobile broadband, towards achieving the African Union goal of universal affordable and quality broadband access by 2030 (component 2), a pre-condition to being able to leverage digital technologies for growth in the various sectors of the economy. A special area of focus will be enhancing broadband services to government and better serving universities and government offices in provincial areas, using an MFD approach, whereby the private sector takes the lead on investment. Supporting a robust cybersecurity framework to protect these investments from attacks and breaches will be critical. Finally, the country can generate opportunities for new jobs it needs through its investments and reforms in digital transformation; this will require creating an ecosystem



in which new digital start-ups can thrive (component 3). There is also a need to ensure that offline citizens benefit from the push towards the digital economy. This is addressed through the design of the matching grants program that seeks to serve both online and offline businesses (also under component 3). Ultimately, the project aims at enabling its citizens, businesses and government to reap digital dividends in the form of faster growth, lower transaction costs, more jobs and greater efficiency. A Contingent Emergency Response Component (CERC) has been added to the program design to allow for greater flexibility in responding to any emergency crises during the duration of the project.

- 25. The project design revolves around mutually reinforcing efforts, starting with telecom market reform** (component 1), which then creates new opportunities for digital transformation in government and education (component 2) and new opportunities for innovation and entrepreneurship (component 3). There is also a reverse causality whereby the project invests in creating demand for internet capacity in secondary cities and rural areas, which will, in turn, stimulate market entry and fuel network roll-out as part of the telecom reform program. Governments, schools and universities serve as anchor tenants under the project to drive nationwide roll-out of fiber and 4G mobile networks. Similarly, the support for digital entrepreneurship will in turn drive further investment in infrastructure and productive capacity, while the provision of additional internet capacity in schools and universities will nurture a new generation of potential entrepreneurs and talented employees for digital start-ups. Thus, the project is intended to create a virtuous circularity between supply and demand (see figure 1 for the theory of change). In the broader economic agenda, the project will contribute to enhancing Ethiopia's competitiveness. The 2019 World Economic Forum (WEF) Global Competitiveness Report ranked Ethiopia 126<sup>th</sup> place out of 141 countries on its *Global Competitiveness Index*, a slippage of four places over the previous year.<sup>26</sup> The project addresses each of the four pillars behind this Index, for example, enabling environment (through component 1), markets (components 1 and 2), human capital (sub-components 2.1 and 2.3), and innovation ecosystem (sub-component 3.1).
- 26. The proposed project structure is built around a phasing of project components and allows scope for scaling up**, for instance through parallel financing from other development partners or additional financing at a later date. In particular, an expansion of educational connectivity (sub-component 2.3) and operationalization of the preparatory work carried out in digital identity document (ID) (under sub-component 1.3) could be envisaged. Similarly, further work on eGovernment could be considered, such as supporting the creation of an integrated digital government enterprise architecture, interoperability platform and hybrid cloud. Originally, this project was planned with a project envelope of US\$300 million. However, faced with the urgent need to redirect IDA-19 resources to the COVID-19 response, the project envelope was reduced to US\$200 million. This involved downsizing the scope of some activities and postponing others to a possible second phase, notably work on expanding the coverage of mobile broadband in rural areas and enhancing Ethiopia's digital skills and literacy. Some preliminary discussions have been held with possible complementary sources of financing, including the European Union's (EU's) Team Europe initiative on Ethiopia's digital economy and the Organization of the Petroleum Exporting Countries (OPEC) fund, which may be able to close this gap. In terms of project phasing, preparatory work for component 1 has started first, with support from the PPA, and sub-component 2.1 (on Digital Government and COVID-19 response) will also be accelerated. Component 3 will kick off as soon as the project becomes effective. But sub-components 2.2 and 2.3 will only start once the selection of new telecom market

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<sup>26</sup> [http://www3.weforum.org/docs/WEF\\_TheGlobalCompetitivenessReport2019.pdf](http://www3.weforum.org/docs/WEF_TheGlobalCompetitivenessReport2019.pdf).



entrants is finalized and their networks are operational, expected by mid-2022. This will permit genuine competitive bidding to take place for the pre-purchase tendering of internet bandwidth under component 2.

### **Component 1- Digital economy, enabling legal and regulatory environment (xxx SDR, US\$20 million equivalent)**

- 27. This component will finance technical assistance (TA) to strengthen the analog foundations of the digital economy, in particular policy-making, and effective regulation for the telecommunications sector and for the development of digital entrepreneurship.** A strong telecommunications sector is built on market competition, private sector participation and effective, independent regulation, all of which have been lacking in Ethiopia to date. The GoE announced its intention, in September 2018, to embark on a process of reform of the telecom sector and subsequently requested support from the IFC<sup>27</sup> for the award of two new full-service telecommunication licenses to compete alongside the incumbent, Ethio Telecom, for which it requested support from the WB for partial privatization. The GoE has also requested support for strengthening the sector regulator (ECA), established in September 2019, and for reviewing the relevant legal and regulatory foundations of the digital economy<sup>28</sup>. A PPA agreement for US\$6 million was signed between the GoE and the WB on October 22, 2019. A significant proportion of the PPA has been dedicated to contracting the transaction advisor to support the partial privatization of Ethio Telecom and to strengthening the ECA.

#### **Sub-component 1.1- Partial privatization of Ethio Telecom (US\$4.3 million equivalent)**

- 28. This sub-component supports the partial privatization of Ethio Telecom, through the recruitment of a transaction advisor under the PPA.** Until the passage of the Communications Services Proclamation, Ethio Telecom, which is 100 percent state owned, enjoyed virtually a complete monopoly in the provision of telecommunication infrastructure and services.<sup>29</sup> The GoE announced that the partial privatization of Ethio Telecom would go ahead with the sale of up to 40 percent to a strategic partner, with a further 5 percent of shares set aside for purchase by Ethiopian nationals.<sup>30</sup> The company would be privatized as a whole (both infrastructure and services arms), with proceeds going to the Industry Development Fund<sup>31</sup>. The GoE has made it clear that support for Ethio Telecom would be restricted to the hiring of a transaction advisor to manage the process. No further TA or IDA funds have been requested to support Ethio Telecom's restructuring process, nor any organizational or staffing development. Nevertheless, risk management instruments, including as a social assessment and a labor management plan, are being produced by the project, but not a social plan for the possible downsizing of Ethio Telecom. Thus, no related risk management instruments, have been produced by the project.
- 29. The process of recruiting a transaction advisor (firm) to manage the privatization process, and preparatory steps, such as completing the inventory of assets and valuation for Ethio Telecom, began in 2019 and was funded under**

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<sup>27</sup> IFC has benefitted from a grant of US\$3 million from the GIF to facilitate this process.

<sup>28</sup> The WB has been supporting the reform of the telecom sector, including the establishment and strengthening of the ECA, since 2018 through Ethiopian Telecom Reform Program P168536, which has received support variously from the Digital Development Partnership (DDP), GIF, Public Private Infrastructure Advisory Facility (PPIAF) and the Ethiopian Multi-Donor Trust Fund (EMDTF).

<sup>29</sup> One exception is in the field of fiber optic networks where both the electricity and railway utilities own their own fiber networks, and do make capacity available to virtual Internet Service Providers (ISPs), such as Websprix, as well as Ethio Telecom itself. But real competition has been limited to date.

<sup>30</sup> <https://www.telecompaper.com/news/ethiopian-govt-offers-40-of-ethio-telecom-to-international-operators-5-to-public--1340061>.

<sup>31</sup> <https://extensia-ltd.com/2021/01/18/ethiopia-telecom-privatization-proceeds-to-go-to-industrial-development-fund/>.



the Ethiopia Telecom Reform Program (P168536). The transaction advisor was hired in September 2020 using funds from this project's PPA. The transaction advisor will assist in preparing a data room, organizing a roadshow for potential investors, conducting a bidding process and advising the GoE on the form the transaction should take, and selecting a strategic partner. The aim would be to complete the partial privatization process in synchronization with the market opening, and the transaction advisor has committed to completing this within nine months (that is, by mid-2021). This timetable was initially slowed by the COVID-19 pandemic, but now seems to be on track.

### **Sub-component 1.2: Strengthening independent ICT sector regulation (US\$11 million equivalent)**

30. A critical part of the overall process of telecom reform is the need to strengthen the ECA, so that it can function effectively as an independent, transparent, efficient and accountable regulatory body. Following its creation in September 2019, the staff of the ECA were drawn initially from the Regulation and Technical Standards Directorate of the former Ministry of Communications and Information Technology (MCIT).<sup>32</sup> ECA is responsible for a broad range of activities, as set out in the Communications Services Proclamation 1948/2019. It is also expected to acquire additional responsibilities for eCommerce, and for the establishment of a future certification authority, under the eTransactions Proclamation. The TA provided to the ECA under this sub-component will be geared towards helping it carry out these tasks in the newly competitive market, through provision of TA and capacity building,<sup>33</sup> including for:
- a) Assisting the ECA in establishing itself, physically, institutionally and professionally.
  - b) Assisting the ECA to draft procedures to create a competitive market environment, including conducting stakeholder consultations, developing draft licenses and allocating scarce resources.
  - c) Assisting the ECA in its role of managing spectrum, including acquiring relevant equipment for spectrum monitoring. A consulting firm has been hired to help conduct a baseline spectrum review and identifying equipment needs using Trust Funds.<sup>34</sup>
  - d) Assisting the ECA in developing a Universal Service Fund (USF), and building the capacity to run it.
  - e) Transferring responsibility for the .et domain name management, currently with Ethio Telecom, to ECA and setting up an internet registry and authorizing private internet registrars to issue domain names using the .et country-code top-level domain (ccTLD).
  - f) Capacity-building and general regulatory strengthening, including study visits and a tailored training program for ECA staff and management, and developing a public communications plan for the overall reform process.
  - g) Assisting the ECA in adopting regulatory standards on siting, design, construction and operation of telecommunications infrastructure in response to climate risks.<sup>35</sup>

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<sup>32</sup> With the changes in market structure, in October 2018 the MCIT was combined with the former Ministry of Science and Technology (MoST) to create the new MInT, which is the main counterpart for this project.

<sup>33</sup> For procurement processes, several of the tasks may be aggregated together -- more detail is provided in annex 2 of the PAD.

<sup>34</sup> The WB team has received funding from the PPIAF and the EDTF to support this study.

<sup>35</sup> Regulatory standards to be strengthened to promote climate resilience according to the ITU recommendations and best practices -- more detail is provided in annex 2 of PAD.



### Sub-component 1.3: Developing a vibrant, inclusive and safe digital economy (US\$4.7 million equivalent)

31. Although the main focus of component 1 is on the partial privatization of Ethio Telecom and strengthening the regulatory authority, there are a number of other tasks associated with creating a vibrant, inclusive and secure digital economy in Ethiopia that the project can support or complement. The MInT has prepared a *Digital Transformation Strategy 2025*,<sup>36</sup> approved by the Council of Ministers in June 2020, which sets out a vision for the development of the digital economy. The GoE has committed to creating some 300,000 new jobs in the digital sector and component 3 will be specifically geared towards helping in achieving this goal. The project will provide legal and regulatory support for the implementation of the strategy, and this activity will support the preparation of possible future activities supported under the program in a number of ways including:
- a) **Digital economy policy.** This will support capacity building of senior government officials, notably in the MInT (also under sub-component 3.2) and the ECA (also under sub-component 1.2), to design, implement and evaluate policies and regulations for the development of the digital economy.
  - b) **Digital business and entrepreneurship.** This activity will support the policy and regulatory actions that will need to be implemented to support implementation of component 3. The jobs creation Commissioner has requested that the project finance a systematic study of existing legislation in different sectors of the economy that might be hindering digital job creation.
  - c) **Digital identification.** A GoE initiative to introduce a foundational ID system has been led by the Ministry of Peace (MoP) in collaboration with the MInT and the Prime Minister's Office. The project will support the operationalization of the enabling environment and key building blocks in line with the *Principles on Identification for Sustainable Development*<sup>37</sup> and international best practices for inclusion, data protection and privacy, and technology and vendor neutrality. Specific activities include:
    - a. Establishment of the legal framework for data protection and the foundational ID system and support to the implementation of key institutions, in particular for the establishment of the data protection authority and the digital ID agency.
    - b. Expert technical advisory support and implementation of a pilot.
    - c. Civil society and public engagement, including dedicated resources for the GoE to organize civil society consultations.
  - d) **Data Privacy and Protection.** The draft Data Privacy and Protection Proclamation calls for the establishment of a new Data Protection Commission. The project will support the operationalization of the law and the establishment of the new commission by funding activities such as registering data controllers and processors, establishing a mechanism by which to receive and decide on complaints and building the commission's capacity to issue regulations, decisions and advice.

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<sup>36</sup> Government of Ethiopia, Ministry of Innovation and Technology (2020). Digital Ethiopia 2025: A digital strategy for Ethiopia's Inclusive Prosperity.

<sup>37</sup> World Bank Group and Center for Global Development. 2017. *Principles on Identification for Sustainable Development: Towards the Digital Age*, available at: <http://documents1.worldbank.org/curated/en/213581486378184357/pdf/Principles-on-identification-for-sustainable-development-toward-the-digital-age.pdf>



## Component 2: Digital government and connectivity (xxx SDR, US\$133 million equivalent)

32. **The objective of this component is to develop the capacity of the GoE to deliver digital services**, and to crowd-in private sector investments to improve regional and domestic connectivity infrastructure, to connect public institutions and educational institutions to broadband internet. It will build upon the market opening measures supported in component 1 to stimulate private-sector-led investment to expand the geographic coverage of broadband networks, to better serve government institutions, businesses and citizens across the country. This component will support the following activities:

### Sub-component 2.1: Digital government and COVID-19 response (US\$50 million equivalent)

33. **This sub-component will help build the GoE's capacity to deliver digital services, and to respond to the COVID-19 pandemic**, including by (a) developing a government ePortal accessible to citizens and firms<sup>38</sup>; (b) improving government facilities for remote working; (c) designing an overall enterprise architecture for IT within government; (d) providing TA to strengthen cybersecurity technical and operational capabilities in government and reinforcing the CERT; and (e) building the digital skills of government officials. The COVID-19 pandemic has heightened the awareness of the value and necessity of delivering government services online and eliminating the need for queueing or face-to-face contact when making and receiving payments or providing information. The ePortal will be developed using principles of human-centered design and in line with global standards on universal accessibility. Activities to be conducted under this sub-component will focus on 'quick wins' in the field of eGovernment, a digital response to COVID-19 and training of senior government officials in digital literacy:

- a) **Among the 'quick wins' for digital government are the development of a consolidated portal for government ministries, departments and agencies (MDAs) and the digitization of selected eServices.** Although, the MoF maintains an up-to-date website ([www.mofed.gov.et](http://www.mofed.gov.et)), this is the exception among government MDAs, and there is no single point of entry for citizens or small and medium-sized enterprises (SMEs). One of the 22 priority projects set out in the *Digital Ethiopia 2025* strategy document is to “employ a human centered approach to designing portals, helping maximize uptake and utilization” with the MInT taking the lead. Personal and private data will be protected in compliance with forthcoming data protection legislation and cybersecurity best practices will be deployed to support the resilience of the portal and eServices from attacks and breaches.
- b) **The COVID-19 pandemic has had a profound impact on working practices within the GoE**, emptying offices and forcing reliance on online working. This activity will seek to address government requirements arising from the pandemic, such as improved facilities for secure remote working, and the installation of up to 50 communications rooms<sup>39</sup> in key ministries and other locations, to be chosen by the GoE. Internet connectivity to support the functioning of the communications rooms will be provided under sub-component 2.2. Secure connectivity to government networks via the personal devices of officials working remotely will also be addressed.

<sup>38</sup> Vietnam provides a good example of a single government ePortal and source of open data; see <https://data.gov.vn/>.

<sup>39</sup> Under the ICT Sector Support Program in Somalia (P152358), some 30 communications rooms were funded for key ministries across the country. They typically comprise a large screen, speakers, microphones, a WiFi router, a computer server and associated furniture. They have proved invaluable since the start of the COVID-19 pandemic has required a shift to remote meetings, particularly for donor interactions. Something similar may be planned for Ethiopia as part of the digital response to COVID-19.



- c) **The project will set the foundations for digital government, in particular by designing an overall enterprise architecture** for further development of IT systems within government, indicating which functions may be centralized and which may be distributed to line ministries and the regional/local government. This will include the definition of Ethiopia's cybersecurity technical architecture across government systems.
- d) **The project will strengthen cybersecurity technical and operational capacity for threat intelligence, prevention, incident response and recovery as well as upgrading cybersecurity skills in government**, in particular by providing TA and training to the government on anticipating and responding to cybersecurity attacks and breaches and on strengthening the capabilities, platforms and applications of the government CERT. The TA will build on the recommendations of a proposed cybersecurity maturity model assessment for Ethiopia.
- e) **This activity aims to support the government in developing and implementing a digital capacity building program** for government officials, aligned with the Digital Skills Country Action Plan<sup>40</sup>, developed with TA from the WB. Capacity building to train government officials to use digital services effectively and securely for coordination and service delivery can be a game changer for digital transformation of government. This will involve also supporting capacity building of government officials to design and implement climate mitigation and adaptation measures for broadband infrastructure and e-Government infrastructure.

#### **Sub-component 2.2- Connecting targeted public institutions to broadband (US\$65 million equivalent)**

- 34. **This sub-component will support the GoE's efforts to enhance its level of digital connectivity to government offices and public institutions across the country.** The proposed mechanism to do this would entail an upfront commitment for the purchase of internet bandwidth capacity from private sector operators under indefeasible right of use (IRU) contracts, through a competitive bidding process, over a period of 5-10 years, applying principles of geographically-averaged pricing. The locations of targeted public institutions to be served would include MDAs, youth community associations across the country, and especially in the first phase selected hospitals and health centers, as part of the COVID-19 response. Locations to be served would be chosen by regional governments, with the eventual goal of serving all areas with a government presence with high speed internet. The GoE has also requested support in the form of bandwidth to be provided to the ICT Park. The user requirements for internet bandwidth would be determined based on a feasibility study, which has been undertaken by the MInT, and in consultation with relevant sector ministries.
- 35. **This sub-component will seek to incentivize private sector investment in internet connectivity (roll-out of fiber-optic networks and 4G/5G mobile networks), using provision of services to public institutions as an anchor tenant for wider geographical service provision.** For that reason, the award of bandwidth contracts would be based on a competitive bidding process and tendering would only begin after the new licenses are awarded, and services are launched, sometime in 2022. The three full-service telecom operators, as well as fiber wholesalers, ISPs and other licensed operators, would be able to bid to offer this capacity, using the tendered contracts as an investment guarantee for a wider network roll-out, benefitting all customers. The MInT will manage the program and will be encouraged to implement progressively cost recovery among MDA clients to ensure sustainability. The project will also fund baseline study so that the impact of enhanced connectivity on government MDAs and on higher education institutions can be tracked, in the light of the COVID-19 pandemic.

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<sup>40</sup> Ministry of Science and Higher Education. 2020. *Digital Skills Country Action Plan*.



### Sub-component 2.3 - Connecting targeted educational institutions to broadband (US\$18 million)

- 36. As an extension of the initiative to connect all government MDAs, this sub-component will focus on connecting selected educational institutions to high-speed internet services.** Ethiopian universities and schools currently lack sufficient connectivity to enable adequate access to the best global information and research collaboration. Where connectivity is available, it is often low-quality, is at low speeds, is unreliable and covers only a limited number of buildings on university or school campuses, or it is provided by satellite links which are slower and more expensive than fiber. In the first phase of the project, this will include universities, CTE, research institutions and TVETs, with the aim of nationwide coverage. In a second phase, should additional financing be made available at a later date, the project could also connect 200 selected secondary schools, and eventually aim to connect all secondary schools in the country. Connecting educational institutions with broadband has become particularly critical as a result of the COVID-19 pandemic which saw schools closed at the end of March 2020. This has obliged them to experiment with a blend of online and face-to-face tuition. Improving connectivity for educational institutions is thus critical to empowering the next generation of digital leaders for the private sector and the government.
- 37. This subcomponent will be implemented in partnership with EthERNET, Ethiopia’s National Research and Education Network (NREN),** part of the Ministry of Science and Higher Education (MoSHE). The organization currently connects some 36 universities, out of a total of around 200 universities. Further, of the roughly 1,500 TVETs in Ethiopia, only 25 are currently connected. Under the project, it is anticipated to connect an additional 30 universities and 40 TVETs, as well as upgrade data centers and routers. As a member of the UbuntuNet Alliance, EthERNET can access low-cost international connectivity, academic content, and training opportunities as part of the Africa Connect 3 initiative, which is supported by the EU. This will allow EthERNET and the universities in the consortium to access low-cost connectivity, open educational resources (OER) online content as well as training.

### Component 3 – Digital business and entrepreneurship (xxx SDR, US\$40 million equivalent)

- 38. This component aims to nurture digital entrepreneurship and incentivize digital businesses to train, provide digital devices, and employ Ethiopians to participate in the digital economy, and thereby to generate income and jobs.** It includes a TA sub-component to the MInT for digital market regulations and implementation. Following the recommendations of the *Digital Entrepreneurship and Innovation* diagnostic study in Ethiopia<sup>41</sup> as well as stakeholder feedback, the proposed interventions under this component are focused on addressing the access to finance and digital economy skills constraints. Specially this component is expected to provide basic digital economy training and digital devices for the informal sector (for example, individual contractors or suppliers), but with an industry focus for practical applications. This component has two main interventions that will finance: (a) two grant funding windows for digital start-ups and digital businesses; and (b) TA to the MInT:

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<sup>41</sup>Commissioned by the WB and delivered by Deloitte in March 2020, it highlighted that Ethiopia’s innovation ecosystem is still at a nascent stage, and made 11 recommendations, ranging from policy reforms (4), access to finance (4), infrastructure and support (2), to skills and literacy (1 recommendation). Digital market policy and access to finance were two areas highlighted as having the highest number of bottlenecks to potential entrepreneurs.



### **Sub-component 3.1 Grants to digital start-ups and digital businesses (US\$35 million equivalent)**

- 39. This sub-component introduces two financing windows for digital start-ups and digital businesses** given the nascent stage of Ethiopia’s digital start-up ecosystem, as demonstrated by limited sector performance in terms of the number of successful digital start-ups and participation by offline micro, small and medium-sized enterprises (MSMEs) and individual contractors to adopt digital business models and participate in the digital economy:
- a) Window 1 is a co-investment grant aimed at helping digital start-ups gain access to risk capital, knowledge and networks to start operating as a viable business, following an MFD approach.
  - b) Window 2 is aimed at incentivizing more established digital businesses to provide training, digital devices and other support to Ethiopians to participate in the digital economy by becoming suppliers of goods/services for productive purposes (for example, enabling offline farmers to sell products via eCommerce and earn higher income).
- 40. A matching grants instrument has been chosen as the most appropriate mechanism to support digital start-ups and digital businesses given the current Ethiopian context.** As part of the TA program for the MInT, under sub-component 3.2, creating a more sustainable early-stage financing mechanism, such as potentially setting up a ‘fund of funds’ or ‘capital guarantee fund’ can be supported by this project.<sup>42</sup>
- 41. During project preparation, the COVID-19 pandemic hit the global economy and MSMEs are one of the most vulnerable segments.** The grant mechanism will allow for quick disbursements of funds to digital start-ups and provide support to small offline suppliers that are most vulnerable to macroeconomic shocks and have little capacity to sustain cash flows – for example, helping restaurant owners to gain access to training and digital devices to take orders from online platforms; helping manufacturers of personal protective equipment (PPE) gain access to an eCommerce platform, or a large B2B wholesaler, to export.

#### ***Window 1: Co-investment Grants to Digital Start-ups (US\$10M equivalent)***

- 42. The objective of this window is to help digital start-ups gain access to risk capital, knowledge and network, to start operating as a viable business with an MFD approach.** The process would start, each year, with a shortlisting by public and private incubators of promising start-ups to pitch in front of a group of private sector investors (for example, Ethiopian Business Angel Network (ETBAN) operated by the IBA Ethiopia Center of Innovation, or the diaspora-led Addis Angel Investors Network). Private investors would then select promising and credible start-ups in which to invest. At this stage, the project would finance a 1:1 co-investment matching grant up to a maximum of US\$100,000 for each of the selected firms. A matching grants manual (MGM) will set out the criteria and verification method of eligible private investors and digital start-ups to minimize the risks of misusing public grants. One of the conditions for grant access would be for the start-up owners to receive digital entrepreneurship training, and an aftercare service, either through the mentorship provided by the private investors or through the incubation/acceleration centers that will help them to submit their pitching proposals. Another condition might be that applications that have an intended developmental/inclusion outcome (for example, climate resilience) will

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<sup>42</sup> The GoE, especially the JCC in partnership with key ministries, such as the MOF, MiNT, and MOTI, is in the process of evaluating various financing arrangements to support building a vibrant innovative ecosystem.



be favored over those with purely commercial interests. The matching grants program will be guided by principles of equal opportunity and will use mechanisms to ensure that women are well represented. The steering committee to be set up for the project would include key relevant government agencies, academia, as well as private sector organizations and other stakeholders who have knowledge of the latest technology trends and applications.

***Window 2: Digital adoption and inclusion grants to digital businesses (US\$25 million equivalent)***

- 43. The objective of this window is to incentivize digital businesses to provide digital economy training and digital devices to suppliers to participate in the digital economy** (for example, enable offline farmers to sell products on eCommerce platforms). The grants of up to US\$200,000 per firm would be provided to selected digital business to partially cover the costs (up to 50 percent) associated with providing training, digital devices and outreach programs to suppliers and contractors (individuals who would be interested to sell their goods or services through the digital platforms). The individuals should use the product or service provided by the digital business to engage in productive economic opportunities, such as becoming a seller on eCommerce, a host on accommodation sharing platform, or a driver on ride sharing or delivering services. To improve the inclusiveness of this training, businesses being awarded these grants will be provided cost reimbursement to reach out specifically to suppliers who are women or belonging to other disadvantaged groups, with indicators tracking their outreach to such suppliers. In particular, the project will seek to address the constraints of female suppliers – who may face higher childcare and household demands, by adopting digital business models to have a more flexible work arrangement (for example, gig jobs in off hours only, or in locations near their households). Rural suppliers could also benefit from receiving training and digital devices to monitor and improve yields to increase income. Areas of training are likely to include digital finance, business and communication skills, SME digital platform adoption and device usage training (for example, taking professional product photos and writing clear product specifications, conform to quality standards to participate in eCommerce).
- 44. The Matching Grants Manual will set out the criteria and verification method by which eligible digital businesses and eligible expense items in the income statement, can qualify for the cost reimbursements.** The guiding principles for cost reimbursement include the following: (a) the income statement of an eligible digital business would need to demonstrate successful disbursements of commissions and or revenue shares to suppliers; and (b) the income statement of an eligible digital business has to show the number of new suppliers recruited each year, with a cost breakdown covering the costs of training and digital device provided to new suppliers (with female, disability and rural supplier breakdowns). It is suggested that the total grant funding envelope targeting the disadvantaged group whether rural, or female, or persons with disabilities should be at least 50 percent of grant window 2. Support for the provision of digital devices will also bolster the implementation of component 2, especially the education sub-component 2.3. To maximize the utilization of the two grant funding windows, the allocation amount between the two windows can be flexible.

**Sub-component 3.2 TA to the Ministry of Innovation and Technology (US\$5 million equivalent)**

- 45. As digital businesses start operating and growing, this sub-component will also provide capacity building to the MInT for harmonizing Ethiopia with the regional digital single market initiative under the proposed HoA**



**initiative.**<sup>43</sup> The harmonization can include conforming to regional standards for e-transactions, e-customs, e-signatures, cross-border data management, consumer protection, and cybersecurity. It is expected that with the digital single market harmonization, digital firms will be able to participate in global value chains. Furthermore, both domestic and foreign firms would operate and compete under the same conditions in Ethiopia, which in turn increases market efficiency and maximizes welfare gains for suppliers and consumers. Capacity building to set up a government co-invested venture capital fund or operationalize the digital government transformation can also be supported.

46. **This component would also assist the MInT in implementing the *Digital Transformation 2025 strategy***<sup>44</sup>. This sets out four digitally-enabled “pathways”, based around agriculture, manufacturing, a domestic IT enabled services sector and tourism. The project will help finance digital specialists within the MInT to work with line ministries in these four areas to develop digital capabilities. The strategy also recognizes three key enabling systems: digital identity document (ID), digital payments and cybersecurity. Again, project funds will be used to review policies and practice in each of these areas and to recommend implementation strategies. The project will also assist MInT in developing the planned innovation fund and a policy document on the implementation of matching grants.

#### **Component 4: Project management (xxx SDR, US\$7 million equivalent)**

47. **The Project Implementation Unit (PIU) will be set up at the MInT**, to become operational before the project becomes effective, as confirmed by the fiduciary assessment. For implementation of the PPA, the Channel One Programs Coordinating Directorate (COPCD) within the MoF is acting as the PIU to manage implementation, working closely with the ECA and MInT, under the supervision of the MoF. This is because the focus of the PPA is on accelerated implementation of component 1 activities associated with telecom reform. During the preparation phase, staff for the future PIU are being recruited using funding from the PPA, along with consultants to carry out urgent preparatory studies on safeguards, and preparation of the Project Procurement Strategy for Development (PPSD) will be accelerated. The project funds under this component will cover the costs of PIU staff, including the project coordinator, two procurement specialists (including one with experience with matching grants), a financial management (FM) specialist and safeguards specialists, both environmental and social. As the project progresses, other positions will be added, including a monitoring and evaluation (M&E) specialist, a communications specialist, and support staff. Other skills may be recruited, such as technical specialists, gender specialists, a grants manager, and so on, though some of these inputs may be provided by the MInT itself. This component will also cover the operational costs of the PIU, such as computers, a communications room (for virtual meetings) and training costs. Other operational costs may be provided directly by the MInT, such as office space.

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<sup>43</sup> The “HoA Initiative” refers to an agreement between the Finance Ministers of Djibouti, Eritrea, Ethiopia, Kenya and Somalia, announced on October 18, 2019 during the WB/IMF Annual Meetings, to take forward discussions on fostering economic integration and regional cooperation in the HoA. Project profiles were further discussed at a ministerial meeting held in Djibouti on February 3-5, 2020, and included a commitment to develop a Digital Single Market in the HoA region. This is proposed for inclusion in a new regional project at the preparation stage (P176181).

<sup>44</sup> MInT. 2020. *Digital Ethiopia 2025. A digital strategy for Ethiopia Inclusive Prosperity*.



### Component 5: Contingent Emergency Response Component (US\$0)

48. A CERC is added to the project structure. This will have an initial zero value but may be financed during the course of the project to allow for an agile response to an eligible crisis or emergency. Adding the component from the beginning, albeit with zero funding, provides for flexibility to respond to crises as they arise, and the project implementation manual (PIM) will be adapted to guide the utilization of this component including risk mitigation strategies. These could include, for instance, humanitarian crises which require the provision of emergency communications services to replace facilities that have been damaged, or to facilitate emergency humanitarian payments using mobile money. The primary issue at the time of writing is the COVID-19 pandemic which requires an urgent response, for instance in the form of additional broadband internet capacity for government offices, especially health centers and hospitals, and for Government employees working from home.

### C. Project Beneficiaries

49. **The Ethiopia Digital Foundations project is expected to benefit all citizens of Ethiopia, who will receive improved access to broadband internet and digital services, as a result of the market opening.** At a macro level, the project will support increased economic growth, productivity and job creation – both within the telecommunications and IT sectors and through the creation of digital solutions and their adoption by economic sectors. At an individual level, citizens will benefit from access to lower cost, higher quality (for example, fiber and 4G+) broadband internet services, access to digital services, digital skills development and entrepreneurship opportunities. By participating in a platform-based digital business, suppliers and contractors are expected to generate additional income and jobs. Consumers using digital means to purchase goods and services are also expected to experience welfare gains in the form of lower costs, more convenience and a greater diversity of products and services, as they would now have an expanded access to products and services from both online and offline means. National and provincial governments will also benefit through lower cost; higher quality access to the internet within public institutions; improved ability to store and manage data in a more secure, reliable and cost-effective manner; ability to launch new digital services much more quickly and securely in a cost-effective manner than is possible today; and by taking advantage of data analytics to improve policy and decision-making. Universities and TVET institutions will also enjoy more reliable bandwidth at much lower cost while providing their staff and students access to electronic resources and databases, including, but not limited to library and computing resources, made available through the network. Private telecom companies and investors will benefit from entering a competitive telecom market of over 100 million people, under an independent sector regulator.
50. **The project places a strong emphasis on closing the ‘digital divide’, empowering youth, women and girls, the elderly and disabled persons,** who are currently digitally-excluded and serving all parts of the country. Meaningful investment and focus on the necessary building blocks like internet connectivity, access to devices, and digital adoption through skills training, can enable digital entrepreneurs (and women, specifically) to thrive. Digital entrepreneurship activities and partnerships will be targeted at women and youth, aiming to create jobs and nurture tomorrow’s digital leaders. Lack of access to finance is among the key factors underlying the gender entrepreneurship gap -- the SME finance gap for female entrepreneurs in developing countries is estimated at



US\$1.48 trillion<sup>45</sup> -- and the financing provided under component 3 should make critical investments in bridging this gap through matching co-investments. Other areas of focus for the project are connectivity and skills development for girls in recognition of the generally lower rates of access to digital services and much lower rates of participation in digital technology fields, through investments under component 2 on connectivity provisioning to higher educational and vocational training institutions. Component 3 will have explicit targets relating to female, rural, and disabled populations as the matching grants are implemented to nurture digital entrepreneurs and incentivize suppliers and contractors to participate in the digital economy to stimulate income growth and generate jobs.

#### D. Results Chain

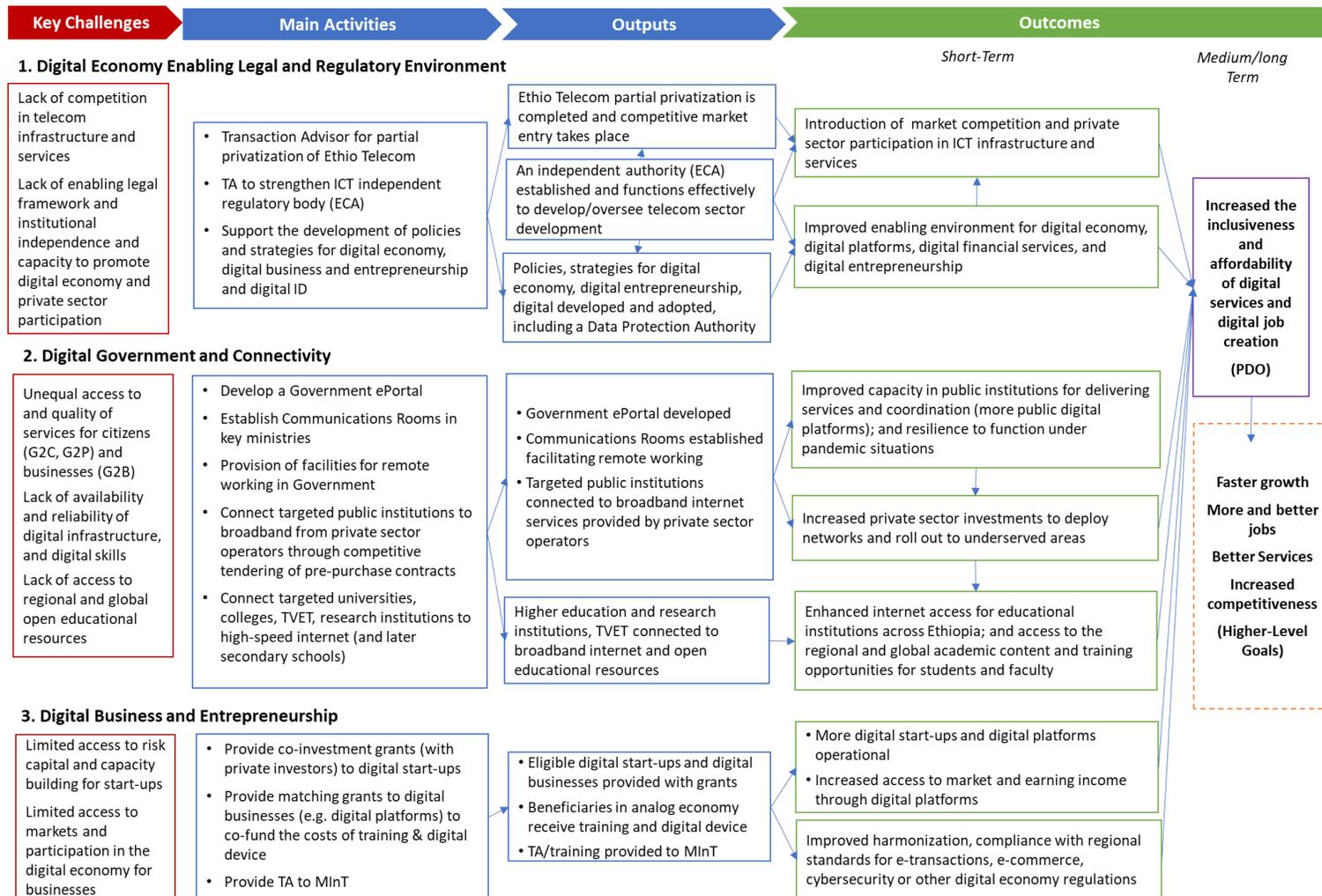
- 51. Theory of Change.** Ethiopia needs to improve access to low-cost internet services, improve the regulatory environment, help digital start-ups to grow, and support suppliers to digital businesses to generate more income, which in turn reduces the 'digital divide' for an inclusive digital economy. The project uses a four-pronged approach to deliver these changes: (a) supply-side (connectivity) interventions to facilitate the roll-out of fiber-optic networks and mobile broadband networks; (b) demand side interventions to increase the availability and affordability of services while developing critical digital literacy; (c) helping to develop a robust enabling environment (policy and regulation) to build trust and confidence in the regulatory process for private sector investment and to promote cross-sectoral digital economy services; and (d) co-investing in digital start-ups that create new digital solutions and enable (rural) suppliers to participate in the digital economy, which in turn creates more jobs and improved services for all. It is expected that through these interventions, the project will generate a positive impact contributing to inclusive social and economic growth and development, the creation of new jobs, improved services, increased access to services and increased country competitiveness. Specific project outcomes will include improved digital connectivity and country-wide digital infrastructure, including underserved areas, increased private sector investments in the digital business sector, improved and an expanded provision of digital services, and a significant contribution of the digital sector to economic growth and job creation.
- 52.** Some critical assumptions include: (a) no weakening in government readiness and commitment to promote new investment in digital infrastructure and services or delay in actions to introduce new competition and license new telecom operators; (b) the government undertakes a broad economic reform beyond the digital economy to address foreign exchange, tariff, investment climate issues to attract foreign investors; (c) the regulator is granted explicit and independent enforcement power, and sufficient financing; (d) the private sector is willing to invest in new nationwide connectivity services; and (e) there are clear rules that regulate temporary bans on internet and mobile access quoting public security and public interests concerns, as these acts dis-incentivize digital businesses and citizens to engage in digital innovations and participate in the digital economy.

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<sup>45</sup> IFC, 2017. *MSME Finance gap: Assessment of the shortfalls and opportunities In financing MSMEs In emerging markets.*



Figure 1: Theory of Change: Digital Ethiopia Foundations Project





## E. Rationale for Bank involvement and role of partners

- 53. The WBG has been supporting an agenda of telecom sector reform across the global regions for the past several decades.** In the 1990s, this focused on telecom market liberalization, private sector participation and establishment of an independent sector regulator. Starting in the 2000s, this was supplemented by a digital government agenda. Now, in the 2020s, the focus has shifted to ensuring that the benefits of digitization reach all parts of the economy and seeking to achieve universal broadband coverage. In the specific case of Ethiopia, this has involved (a) providing TA for the development of a national broadband strategy (P159381) and the promotion of the domestic ICT manufacturing sector; (b) providing technical expertise on developing an enabling policy and regulatory framework in the telecom sector, (P168536); and (c) engaging a range of complementary instruments (for example, investment projects, development policy financing [DPF], trust funded activities) in support of public and private sector actors, to generate more equitable and beneficial development outcomes. With the Digital Ethiopia project, the WB will draw upon IDA financing to scale up significantly this earlier TA work and to operationalize work on network expansion and digital entrepreneurship.
- 54. The WB is able to mobilize resources from a wide variety of sources, to complement the IDA financing.** The project will be supported by an IFC operation on assisting the ECA with the award of two new full-service telecom licenses, which will be selected through a competitive tendering process, launched in May 2020. Funds from IDA and IFC are supplemented by funds from the GIF, the DDP, the PPIAF and the EDTF, a multi-donor trust fund established to support the DPF operation (P169079), which became available in late 2020. The latter is being used to support the ECA, *inter alia*, in undertaking a spectrum management review, as the DPF includes a number of telecom-related prior actions.
- 55. Stimulating technology adoption was considered a development priority** under the 2018 Systematic Country Diagnostic (SCD). As the CPF FY18-22 addresses the need to promote structural and economic transformation through increased productivity, the proposed activities will help enhance business and investment climate and proposes new approaches for sustainable infrastructure financing. The proposed project is an integral part of the DE4A initiative of the WBG and the African Union's Digital Transformation Strategy, 2020-2030. These vision documents set out an ambitious regional goal to digitally enable every African person, business, and government by 2030. Hence well-designed, systematic country-level and regional programs are needed to succeed in its implementation.

### Project cost and financing

- 56. The Ethiopia Digital Foundations Project will be financed through a US\$200 million equivalent IDA credit to the GoE. In addition, there is a US\$3 million grant from the GIF to the IFC in complementary financing<sup>46</sup>.** The project will use the Investment Project Financing (IPF) instrument. An example of support from other development partners is the GIF support to IFC, related to component 1, and the EU AfricaConnect3 program support for sub-

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<sup>46</sup> The US\$3m grant from the GIF to the IFC is intended to cover some of the costs of IFC's work as a financial advisor to the government for the award of two new full-service telecom licenses (relevant to component 1). This is in the form of a bank-executed trust fund, TF0B1704, concluded on December 4, 2019. At the same time, GIF provided a smaller grant to support the WB work on support for the regulator, through project P168536. The division of labor between the IFC and WB teams, and separation of tasks, was agreed between the WBG and the government in late 2019, but the two teams are working to the same ends.



component 2.3. It is also anticipated that the project funds will leverage investment from the private sector, under an MFD approach, notably the private sector investors bidding for contracts under the ECA-led license awards and a strategic partner in the partial privatization of Ethio Telecom.

57. **The additional flexibility of using a PPA, as well as the facility for retroactive financing, will enable the GoE to respond to the urgent need for sector reform** while also benefitting from the fiduciary expertise of the WB. The mechanism of using long-term IRUs for capacity purchase (for sub-component 2.1) and market mechanisms for support to broadband for government MDA and higher education (sub-components 2.1 and 2.2), as well as matching grants (sub-component 3.1) should help to establish long-term sustainability for the activities financed. How to ensure sustainability for other activities will be studied further during the project implementation phase.

COMPONENTS	IDA Financing (US\$, million)
<b>Component 1: Digital economy, enabling legal and regulatory environment</b>	<b>20.0</b>
Sub-component 1.1: Partial privatization of Ethio Telecom	4.3
Sub-component 1.2: Strengthening independent ICT sector regulation	11.0
Sub-component 1.3: Supporting the development of the digital economy	4.7
<b>Component 2: Digital government and connectivity</b>	<b>133.0</b>
Sub-component 2.1: Digital government and COVID-19 response	50.0
Sub-component 2.2: Connecting targeted public institutions to broadband	65.0
Sub-component 2.3: Connecting targeted educational institutions to broadband	18.0
<b>Component 3 – Digital business and entrepreneurship</b>	<b>40.0</b>
Sub-component 3.1: Grants to digital start-ups and digital businesses	
• Window 1: Co-investment grants to digital start-ups	10.0
• Window 2: Digital adoption and inclusion grants to digital businesses	25.0
Sub-component 3.2: TA to the MiNT	5.0
<b>Component 4: Project Management</b>	<b>7.0</b>
<b>Component 5: Contingent Emergency Response Component (CERC)</b>	<b>0.0</b>
<b>Total</b>	<b>200.0</b>

#### Climate Co-Benefits

58. The project has been screened for climate and disaster risk, using the risk screening assessment tool. Ethiopia’s exposure to relevant climate and geophysical hazards is considered high. In particular, Ethiopia is at high risk of frequent irregularities and variability in climate patterns. These patterns will have multidimensional effects on the Ethiopian economy, affecting agricultural productivity, energy use, and water dynamics. Meanwhile, increased heavy rainfall as a result of climate change may lead to serious malfunctioning and disruptions of critical infrastructures, including communications facilities and data centers through soil erosion, waterlogging, and flooding. This project does not directly support infrastructure deployment, but the project’s success depends heavily on investment of the private sector into the infrastructure sector. As such, the project design is conscious of the fact that there could be several negative externalities on the digital economy without a project intervention



on climate resilience. The project aims to systematically improve climate resilience in Ethiopia through a program of activities that cover both climate adaptation and mitigation.

- (a) **Climate adaptation.** The project will contribute towards the achievement of climate priorities through enhanced climate resilience of communications infrastructure. In fact, the expansion and diversification of the telecommunications infrastructure as a result of the liberalization itself increases its resilience to the impact of climate change as it is less likely that the varied types of critical infrastructure would become unusable at the same time. In addition, the extended coverage and usage of telecommunications services as a result of the sector reform process supported by the project (sub-components 1.1 and 1.2) would enable the creation of climate early warning and emergency response systems through the uninterrupted network available in the aftermath of a disaster. Therefore, the project includes a climate indicator to track the number of citizens to receive extreme weather alerts by short message service (SMS). The project also includes more active interventions to prepare local laws and regulatory standards to be imposed on telecom operators or licence criteria or conditions for class licenses to support adaptation to climate change and improve the resilience of the ICT infrastructure to the impacts of climate change (sub-components 1.2). These standards will subsequently apply to private operators who would provide bandwidth capacity to government institutions and higher education institutions and eventually build underground fiber networks or other related facilities (sub-components 2.2 and 2.3).
- (b) **Climate mitigation.** Major benefits stem from the increased use of digital technologies to substitute for physical movement of goods and people (shifting 'bits' not 'atoms'). In particular, the geographically balanced roll out of broadband networks would significantly contribute to reducing greenhouse gas (GHG) emissions (sub-components 2.2 and 2.3). According to Ericsson research, digital services such as videoconferencing, e-health, and e-learning made available through the improved availability of high-speed broadband services could help reduce GHG emission by up to 15 percent by 2030 worldwide, amounting to around 10 gigatonnes of CO<sub>2</sub>e—more than the current carbon footprint of the EU and United States combined. During the first few months of the COVID-19 pandemic in 2020, an increase of 30-40 percent globally in the usage of international bandwidth was associated with a reduction in the growth rate of GHGs as remote working substituted for commuting and international travel. In addition, the affordable mobile tariff achieved through the project could deliver huge reductions in power consumption by displacing the need for multiple single-purpose devices (from radios and TVs to music systems and cameras) with multifunctional internet-linked devices (subcomponent 1.2).

## F. Lessons Learned and Reflected in the Project Design

- 59. The WBG has wide experience of working with countries to reform their telecom sectors. Although much of this work was carried out before 2010, more recent projects include the fourth phase of the Regional Communications Infrastructure Program in the Union of the Comoros (P118213), which involved the introduction of telecom competition to the incumbent, passage of a new telecoms law and strengthening of the regulatory authority. The WB is also engaged in a TA program for the establishment of a new regulatory authority in neighboring Djibouti (P171784). In The Gambia, the Fiscal Management Development Project (P166695) is financing the transaction advisor to introduce private participation into the state-owned telecom assets and companies. The GoE has been particularly interested in the work done by the WB and IFC in Myanmar through the Telecommunications Sector Reform project (P145534), which similarly went through a process of market opening and repositioning of the incumbent operator, starting in 2012. Following the MFD approach and lessons learned from past experience, the



project focuses on fostering private investment through different approaches, ranging from the identification of legal and regulatory bottlenecks to the use of public funds to stimulate investments. When using public funds, the project ensures that four key principles, in line with international best practices and the MFD approach, are translated in the proposed activities.

60. The WBG has also drawn extensive lessons for designing component 2 on network expansion and eGovernment or digital government services, and increasing internet connectivity for universities and TVETs from previous similar projects financed by the WB, including: the Madagascar Regional Communications Infrastructure Program (P094103), Digital Malawi Program Phase 1 (P160533), and the Tanzania Regional Communications Infrastructure Program (P111432). In particular, the proposed model of pre-purchase of internet capacity that was used in these projects is applied in this project. In terms of analytical work, in December 2018 the WB issued a report on *Innovative Business Models for expanding Fiber Optic Networks and closing the access gaps*<sup>47</sup>, which is now complemented by an eLearning course<sup>48</sup>, and the team will draw upon this in seeking innovative approaches to extend the scope and scale of broadband coverage within the country, under sub-components 2.2 and 2.3.

61. Supporting digital businesses and entrepreneurship is a relatively new vector for development assistance, but one where the WB has gained a lot of experience in the recent years in particular in African countries. Most of the projects are being designed based on country-specific analytic work and each project architecture proves to be a great avenue for learning and knowledge exchange. Specifically, the WB has a wide experience in the provision of programs based around matching grants, including under the Ethiopia Competitiveness and Job Creation Project (P143302) as well as in neighboring Somalia, the Somali Core Economic Institutions and Opportunities Program (SCORE) (P152241) and also in Armenia under the E-Society and Innovation for Competitiveness (EIC) Project (P115647). With regard to reaching women beneficiaries under the component 3, the project will leverage lessons learned from the Ethiopia Financing Women Entrepreneurs (IFWE) project (P171245) and other similar projects under the Africa Gender Innovation Lab (GIL). The IFWE project will support pilots focused on supporting female entrepreneurs to engage in ecommerce and gig-platforms and it is envisioned that the results of the pilot will inform component 3 which is set to start mid-2022. Other projects from which the project would draw synergies from include the Women Entrepreneurship Development Project (P122764) which will provide digital skills/payments capacity building for financial institutions and women entrepreneurs that may complement some of the planned activities.

### III. IMPLEMENTATION ARRANGEMENTS

#### A. Institutional and Implementation Arrangements

62. **The project will be implemented under the leadership of MInT, building upon the initial work under the PPA led by the MoF**, and coordinating the work of the different agencies, including the MoF, the Public Enterprises Holding and Administration Agency (PEHAA), the ECA and EthERNET (see figure 2). Initially, the COPCD will act as a transitional PIU, for implementation of activities funded under the PPA. During this phase, the COPCD supported

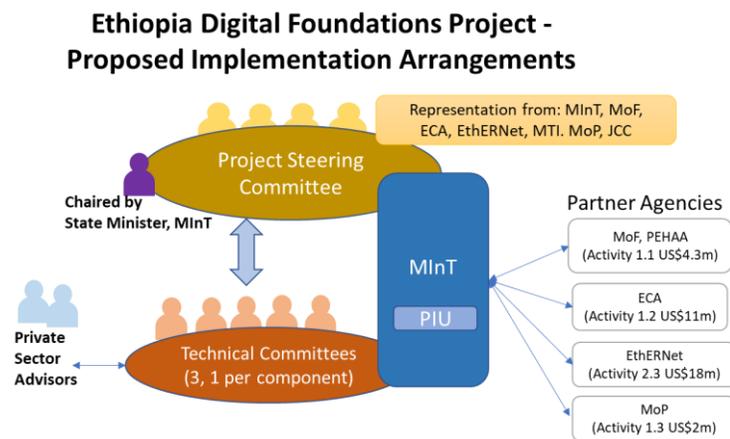
<sup>47</sup> <https://elibrary.worldbank.org/doi/abs/10.1596/31072>.

<sup>48</sup> <https://olc.worldbank.org/content/innovative-business-models-expanding-fiber-optic-networks-and-closing-access-gaps-self-paced>.



recruitment of project staff for the future PIU, experts to support the ECA, as well as the Transaction Advisor for the partial privatization of Ethio Telecom. Once the project becomes effective, the MInT will assume overall implementation leadership, and will host the PIU for the remaining of the project life, under ‘Channel Two’ procedures (see annex 1). The MoF and PEHAA will partner with the MInT as implementing agency for sub-component 1.1 and ECA for sub-component 1.2 respectively, while the MInT will deliver most of the activities under sub-components 1.3, 2.1 and component 3. EthERNet will partner with the MInT for activities under sub-component 2.3. For Digital ID (under sub-component 1.3), the MInT will also liaise with the MoP on the aspects relevant to digital ID. As a new ministry, the MInT has limited experience implementing WB ICT projects, but support will be provided by WB specialists.

Figure 2: Illustration of proposed project implementation arrangements



63. The PIU will transition from the COPCD to the new PIU within the MInT as the project progresses towards readiness, with the transition expected to be complete by effectiveness. The creation of the PIU is a condition of effectiveness in the financing agreement. The criteria to determine the exact timing of the transition from the COPCD to the MInT include completion of the fiduciary assessment of the capacity of the MInT; recruitment and training of key positions in the new PIU (for example, procurement, FM, safeguards and an overall project coordinator); and declaration of project effectiveness. Although the GoE requested a facility for retroactive financing, in practice the PPA funds have been sufficient to date.
64. The PIU will be guided by a project steering committee (PSC), chaired by a State Minister of the MInT (or designee) and comprising representatives from the MoF, ECA, EthERNet (representing the MoSHE), MoP, the JCC and the MoTI. Three technical committees (TC), one for each component, each chaired by MInT and appointed by and reporting to the PSC, will conduct specific tasks, such as managing the grants and monitoring and evaluation (M&E) reporting process for component 3. The TCs will have similar membership to the PSC but extend their consultations also to the private sector, including the new market entrants. Terms of reference (TOR) for the PSC and TCs will be defined before project effectiveness.



- 65. Data Protection.** Large volumes of personal data, personally identifiable information and sensitive data are likely to be collected and used in connection with the management of this project under circumstances where measures to ensure the legitimate, appropriate and proportionate use and processing of that data do not yet feature in national law<sup>49</sup>. To guard against potential abuse of that data, the project will incorporate best international practices for dealing with such data in such circumstances. Such measures may include, by way of example, (a) data minimization (collecting only data that are necessary for the purpose); (b) data accuracy (correcting or erasing data that are not necessary or are inaccurate); (c) use limitations (data are only used for legitimate and related purposes); (d) data retention (retain data only for as long as they are necessary); (e) informing data subjects of use and processing of data and allowing data subjects the opportunity to correct information about them, and so on.

## **B. Results monitoring and evaluation arrangements**

- 66.** The results framework for the project has been developed to track the progress on market liberalization, deployment of the broadband infrastructure, digital businesses and entrepreneurship development at individual and institutional levels, with a particular focus on gender. Each component includes specific milestones/targets. The PIU at the MInT will have responsibility for the overall project M&E. It will establish standard formats and guidelines for data collection and reporting, and review and validate the information and data received from relevant public and private entities. The ECA also routinely reports sector data to international organizations including the ITU, while operators report to the ECA and the Global System for Mobile Communication Association (GSMA).
- 67.** The **views of beneficiaries, including telecommunications operators, service providers, firms, individual users of telecoms services, digital entrepreneurs and individuals participating in the digital economy will be brought into the M&E process.** The PIU, in consultation with the other implementing agencies, will prepare progress reports every semester, in accordance with a format agreed with the WB and will cover: (a) physical and financial progress achieved against agreed implementation and disbursement indicators; (b) issues and problem areas, including comments on actions to address identified problems; and (c) work programs and budget, including forward-looking estimates.

## **C. Sustainability**

- 68. As the GoE embarks on the liberalization process of the telecom sector, maintaining the momentum of the reforms will be critical for the achievement and sustainability of the desired outcomes of the project.** The key concerns in this respect include: (a) sustainability of meaningful competition in the telecom sector under component 1, and avoiding collusion, predatory pricing or other anti-competitive practices by major players, which in return requires support for the newly-established regulator, the ECA, under component 1; (b) sustainability of the digital connectivity initiatives under component 2; and (c) sustainability of the digital entrepreneurship initiatives under component 3, including encouraging the adoption of sound business models by those digital businesses and start-ups supported under the project.

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<sup>49</sup> A new *Proclamation to provide for personal data protection* is under preparation, but as of February 2021 had not yet entered into Law. Once established, the project will provide support to the new Data Protection Authority, under sub-component 1.3.



69. **The experience of other countries concerning sustainability of competition is that, without the appropriate reforms, regulatory bottlenecks and state intervention typically continue to hamper competition regardless of the number of operators in the market.** The project design has taken this into account by ensuring that key legal and regulatory elements are in place to help ensure a level-playing field for the various segments of the telecom sector. The ECA will be provided with TA to undertake detailed market monitoring and supervision to assess the effectiveness of competition, and the law provides it with the ability to intervene in cases where one player is judged to have significant market power. Recruitment and retention of skilled staff will be critical for the ECA to deliver on the promise of a reformed telecom sector, and those staff must be paid sufficiently well to avoid the risk of “capture” by operators. Component 1 focuses on providing technical assistance to ECA to address this capacity issue including training for existing staff as well as technical expert consultancies. In the longer term, the ECA will need to become self-financing from the administrative fees it levies from licensed operators (for example, spectrum fees and a share of license fees).
70. **The need for capacity purchase schemes on national networks to support targeted users (that is, universities, government users [MDAs], the ICT Park, and other groups of users) will continue long after project closing.** In this regard, the use of long-term pre-purchase agreements (typically for 5-10 years) will ensure the benefits from the program will continue after completion. Furthermore, the MInT is encouraged to implement a progressive cost-recovery scheme among MDA clients it provides with bandwidth to ensure sustainability and capacity on the national and regional backbones. With competition, capacity prices should also fall over time, and additional pre-purchase agreements will be scheduled, and existing ones renegotiated, to take advantage of this. The project will also support the creation of a USF, to be managed by the ECA, to take on this role in the longer term. If funding is available for a second phase of the program, support for extending rural broadband coverage would be provided from project funds to supplement the resources of the USF.

#### IV. PROJECT APPRAISAL SUMMARY

##### A. Technical, Economic and Financial Analysis

###### Technical Analysis

71. **The Ethiopia Digital Foundations project will deliver increased access to affordable and high-quality internet services for the government, businesses, and citizens while promoting digital entrepreneurship and creating digital jobs.** This approach aligns with lessons learned from other operations and the findings of the World Development Report (WDR) 2016<sup>50</sup>, which highlights the need for both access to technology and complementary ‘analog’ enablers. The project components were designed as an integrated and interlinked program to maximize the development impact of the investments. Investment is being complemented by TA, reform, and skills development support to both increase access to ICTs and digital services while also enabling citizens, businesses, and the government with the skills, capacity, and incentives to use them to maximum advantage.

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<sup>50</sup> World Bank. 2016, WDR: Digital Dividends.



- 72. A policy, legal, and regulatory enabling environment contributes to reducing the costs and risks of private investment, which is key to develop the digital economy.** The project will focus on developing the telecom sector regulatory framework and improving the government capacity to create an enabling environment for the overall digital ecosystem. Policy and regulatory certainty give incentives to potential investors and new service providers when the country is trying to liberalize the telecom market, which has long sustained its monopoly by the state-owned operator. The government proposes a functional separation of Ethio Telecom into infrastructure and services arms, with support under the project. This will allow Ethio Telecom's infrastructure arm to price and sell wholesale services to all market players on a non-discriminatory basis. It will also improve the SOE's efficiency and operational effectiveness in the retail market. The new telecom regulatory framework, drafted with TA under the program's PPA, sets out rights and obligations of the licenses, including network roll-out requirements to cover 95 percent of the population within five years. The mandatory requirement facilitates the infrastructure investments and promises to close the digital divide in rural areas where commercial incentives are small. The elements of the capacity building training to senior government officials take an ecosystem approach by covering issues of enabling environments for future e-Government and digital financial services in addition to digital infrastructure, skills, and entrepreneurship.
- 73. The design of the project is based on a model of competitive, private-sector delivery wherever possible, utilizing an MFD approach to leverage private sector expertise and financing and to contribute to overall sector development.** The country has a few different options to develop its backbone or access networks: a direct government investment or a provision of incentives to attract private investment. Meanwhile, the operators in the competitive market, including the incumbent and the two new operators, are likely to make the first move in proven commercially viable areas where there is no need for government intervention, but there could be significant delays in the timing of investment in new network capacity in other areas. The higher the network investment costs, the greater the uncertainty about future financial viability, especially given the uncertainties on the trading environment as a result of the COVID-19 pandemic. The long-term pre-purchase agreements for internet will assist in cost recovery for the investment and allow the investors to avoid the risk of asset stranding, encouraging them to commit to the investment or capital-intensive network upgrades. In addition, the award of bandwidth contracts will be based on technology-neutral competitive tenders and will induce the private sector to invest in the most cost effective and efficient manner based on commercial decisions. The provision of connectivity to the targeted public institutions then allows them to serve as community anchor institutions. Under the second phase of the project, this could be extended to cover also secondary schools. The program beneficiary institutions will share the high-capacity broadband services with those living in areas with non-commercially viable last-mile access, effectively reaching the otherwise unserved population. Similarly, the matching grant component also ensures that it is a co-investment mechanism with private investors and digital businesses, instead of a pure public-driven decision process in grant access decisions.
- 74. The project will support the network capacity required to connect higher education institutions,** in particular by supporting the membership fee and the connectivity counterpart funding for Ethiopia to join the EU AfricaConnect3 Program. This payment would enable Ethiopia to tap into the total EUR 37,500,000 budget made available by the European Commission and NRENs of Africa; hence mobilizing funds for development. Ethiopia will be connected to the regional backbone network that interconnects universities that are members of NRENs. In addition, by aggregating demand, the member institutions can attain economies of scale for large volume procurement of bandwidth and equipment as they build out the national backbone to connect in-country points



of presence (PoPs) to the nearest PoP in the region belonging to GEANT, the pan-European research, and education network. In addition, the planned capacity-building support to EthERNET's technical staff on network engineering and cybersecurity ensures that the network and services are provided and managed in a stable and sustainable manner.

### Economic Analysis

75. **Structural changes in the legal and regulatory framework and in the institutional context will influence the diffusion and adoption of digital technologies and accelerate the evolution of the digital ecosystem** (component 1). According to a recent study of the economic contribution of broadband from the ITU, an increase in regulatory performance (as measured by the ICT regulatory tracker) is positively and significantly correlated (with a coefficient higher than 0.60) with the growth of markets for digital services and applications<sup>51</sup>. Ethiopia's projected broadband adoption growth rate (see figure 1 in annex 3) is expected to grow by 28 percent per year following market liberalization, and this will further increase with the publicly funded investments in internet capacity, particularly the national backbone, planned under component 2. Component 3 under window 2 will directly support the growth and economies of scales of digital businesses, especially for platform-based ones in the digital era.
76. **In effect, the accelerated connectivity, attributed to the project, will contribute significantly to GDP growth.** The accelerated connectivity supported by Digital Ethiopia is expected to lead to a 2.64 to 4.40 percentage point increase in Ethiopia's GDP growth in 2027.<sup>52</sup> The resulting increase in GDP ranges from US\$1,857.79 to US\$2,322.24 million in 2027. The analysis presents a benefit-cost ratio between 8.85 and 11.06 for an investment of US\$200 million. The expected internal rate of return (using cost benefit analysis [CBA] calculations) is between 122 percent and 141 percent. The project's protected contribution to the GDP growth is expected to be even greater with the digital business and entrepreneurship component (component 3).
77. While the net economy-wide gain from the increased access to affordable, high-quality internet is clear, the project design also addresses needs and interests of each stakeholder, which further should enhance the expected positive impacts of the development intervention.
  - **The Ethiopian Government.** The government is expected to raise considerable revenues from the sale of the two full-service licenses<sup>53</sup> as well as the projected sale of a minority share of Ethio Telecom's assets. With the growth of the subscriber base and the extended range of services offered, there will also be a boost in sales taxes and other fees (for example, annual license fees, excise taxes on handsets, universal service contributions, spectrum fees, corporation taxes, and so on) from a larger, revitalized market. Moreover, the

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<sup>51</sup> ITU. 2018. *The Economic Contribution of Broadband, Digitization and ICT Regulation*. (<https://www.itu.int/pub/D-PREF-EF.BDR-2018>).

<sup>52</sup> The regression analysis by the WB estimates the results for the impact of mobile broadband in developing countries that are relatively robust across both the base specification and a wide series of different full-period (2005-2015) specifications, suggesting that a 10 percentage point increase in the mobile broadband penetration rate (say, from 20 percent to 30 percent) increases annual GDP/capita growth by approximately 0.48-0.60 percentage points. This range has been used to provide the range for the CBA above.

<sup>53</sup> Originally, the sale of the licenses was projected to raise around US\$1 billion each. However, with foreign investors now restricted from offering digital financial services, as well as limitations on the entry of specialist cell towers companies, the market value of the licenses is likely to be reduced.



government will be able to gain revenue from the commercial utilization of scarce public resources, principally spectrum, by leveraging private sector investment through the MFD approach.

- **Ethio Telecom.** Ethio Telecom can benefit from a substantial efficiency gain and greater flexibility through functional separation and private-sector management, which offers a means to attract innovation and management skills. While its number of jobs may decline, the remaining jobs will most likely be better remunerated, and former employees should be able to find jobs elsewhere in the expanded digital economy.
- **Business opportunities.** Through the reform of the telecom sector, and the increased broadband adoption, a range of new business opportunities should open up for startups as well as existing businesses. The increasing spread of digital technologies can also improve efficiencies across a range of sectors and deliver new products, such as mobile money, that can transform access to finance.
- **Educational and research institutions.** The project will also reduce connectivity costs for Ethiopia's educational institutions and enable access to regional and global educational content and research. The prevailing wholesale market rate for international bandwidth is around US\$40 per megabit per second (Mbit/s) per month in Ethiopia, compared with less than US\$10 in Kenya. Through support to EthERNET and participation in the EU Africa Connect 3 program, bulk bandwidth costs are expected to drop to as little as US\$5 per Mbit/s per month, an eightfold reduction in spending, per unit price (and capacity usage is expected to rise because of increased bandwidth).
- **Investment.** The new investment in new network capacity is likely to exceed US\$100 billion over the next decade, with much of the capital coming from overseas, over and above the fees paid for the two new full-service licenses, as well as additional infrastructure licenses, for instance for cell tower construction, fiber wholesale networks, satellite networks, and so on.
- **Citizens.** Market liberalization will reduce the final cost of services and equipment to customers while enabling a wider variety of mobile services which were previously highly restricted under the state-owned monopoly. This will, in turn, drive increased mobile penetration and contribute to closing the digital divide.

**78. In addition, the proposed activities are expected to have direct and indirect poverty-reducing effects.** Introducing competition in the ICT sector is expected to improve service delivery for households and businesses while reducing costs and increasing penetration. Preliminary estimates using the Welfare and Competition (WELCOM) simulation tool<sup>54</sup> suggest that the opening of the sector will trigger a decline in prices by 25 percent in the short term and by up to 67 percent in the long term. This fall in prices will see a 13.6 percent proportional increase in the take up of mobile services. Using WELCOM's results, this will induce a reduction in poverty by 0.2 percentage points in the short term and by 0.8 percentage points in the longer term. No significant negative distributional impacts are expected, and indeed the price reductions should significantly benefit the poor.

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<sup>54</sup> The WELCOM (Welfare and Competition) simulation tool was developed by the Poverty and Equity Global Practice at the World Bank. WELCOM estimates the distributional effects focusing on the price channel, simulating a change in prices in the good or market of interest as a result of changes in the competition conditions. Under the most basic approach, WELCOM simulates as the change in welfare for those households with positive consumption using a Laspeyres well-being money metric measure. For more information please refer to: Araar, Abdelkrim Araar, Eduardo Alonso Malasquez, Sergio Olivieri, and Carlos Rodriguez Castelan. (2018). "Introducing WELCOM: A tool to simulate the welfare impacts of competition. Version 2.1." <http://dasp.ecn.ulaval.ca/webwel/welcom.html>.



- 79. Based on experience from other countries, the indirect impacts will likely be larger and more transformative.** The successful reforms supported by capacity building at both basic and higher education levels are expected to incentivize more people to use mobile services, connecting the previously unconnected to information, markets, and services. If complementary reforms in other sectors are enacted, to be supported by component 3, mobile devices can help poor people manage credit better with lower transaction charges and can improve their ability to cope with risks, thereby reducing vulnerability and poverty. Mobile money offers great promise in increasing resilience, reducing risks and smoothing consumption through formal and informal insurance and extending financial services to the large share of unbanked people in Ethiopia.
- 80. While the digital economy is also expected to generate 300,000 jobs each year, the reform and the proposed project have additional positive poverty implications.** The JCC estimates that the ICT sector will employ over 126,000 workers across the industry by 2025, an increase of 62 percent from 2018. As the digital ecosystem supports growth across the economy, the multiplier effect of job creation means that employment in the ICT industry could also create over 240,000 new indirect jobs. While the partial privatization of the Ethio Telecom may require a reduction in its employment levels in the short term, to remain competitive, the progress toward new job creation in the wider sector will be led by the private sector.
- 81. The job creation and income growth potential of the digital economy is especially high for vulnerable and economically significant groups, such as farmers, youth, and women, by adopting digital business models.** The agriculture sector contributes to more than three quarters of employment, 40 percent of output, and one third of exports in Ethiopia (Ethiopia SCD 2016). Currently, this sector is characterized by an 'informal value chain' with layers of intermediaries extracting rent without a clear value addition to the chain. Box 1 in annex 3 illustrates a typical livestock value chain from farmers to consumers in Ethiopia. Farmers' incomes are being squeezed while consumers and exporters are paying a high price because of this informal value chain. Adopting a digital platform solution to connect farmers and end consumers directly can reduce search, tracing, and transaction costs, potentially helping farmers expand access to markets, achieve economies of scale, and generate higher income. This digital platform model also helps reduce prices for consumers and create additional digital and non-digital jobs (for example, distribution center managers, animal health inspector, tracking device manufacturers). In addition, it is estimated that 90 percent of the meat export market in Ethiopia is informal. Digital platforms could also help address the informality by leaving an electronic trail of transactions and ensuring product quality and safety (and even for tax purposes). The same productivity gain and job creation potential applies to other sectors of the economy, such as tourism, logistics, and manufacturing, adopting digital platforms to reduce search frictions.

## B. Fiduciary

- 82. Financial Management.** An FM assessment was conducted at the MInT, the ECA and the MoSHE in accordance with the FM manual for WB IPF Operations issued on February 10, 2017 and the supporting guidance note (February 28, 2017).
- 83.** The project will inherit the various strengths of the country's public financial management (PFM) system. Several aspects of the PFM system function well, such as the budget process, budget classification system, and roll out of Integrated Financial Management Information System (IFMIS) at the federal level, in compliance with financial



regulations and a satisfactory internal control system of government. However, there are also systemic weaknesses including challenges in using International Public Sector Accounting Standards (IPSAS), high staff turnover, a shortage of qualified accountants and auditors in the public bodies, and a weak internal audit function. Several reforms are being undertaken to improve the country's PFM systems through the government's PFM reform strategy and the support of development partners (notably the PFM project funded by the WBG). Two of the three assessed entities do not have recent experience in managing WB financed operations (the MInT did manage a WB project some time ago but the ECA, which was created in September 2019, has not managed any projects at all). ECA has not yet recruited and assigned staff for budget, accounting (partial), procurement, property management, and internal audit sections. In addition, the external audit reports of the MInT and MoSHE revealed serious findings or internal controls weaknesses in budgeting and budget control, advances and payables, record keeping, and procurement. The grant releases under component 3 may lead to a risk of delay in accounting and could cause challenges in ensuring its use for purposes intended. Based on the assessment, the FM risk of the project is Substantial. Mitigating measures proposed in the action plan are agreed and, once implemented, will help reduce the risk during project implementation.

- 84. The project will follow the 'Channel Two' fund flow mechanism of the government whereby funds from IDA will flow to the MInT and then to the ECA and MoSHE.** IDA funds will be deposited into a separate designated account to be opened at the NBE and managed by the MInT. Local currency accounts will be opened for the MInT and the other entities (MoSHE and ECA). The project will use report-based disbursement, with submission of quarterly interim financial reports (IFRs) 45 days from the end of the quarter with two quarters' expenditure forecast to the WB and replenishment of project accounts accordingly. All disbursement methods are available to the project. The project will develop its own Financial Management Manual (FMM) outlining in detail the FM arrangements and procedures including the budgeting, accounting, internal control procedures and reporting requirements. The project will also develop an MGM to administer the grants envisaged to be given to third parties under component 3. Staffing arrangements have been outlined to supplement the existing system. Disbursement conditions which relate to preparation of manuals are proposed and agreed. The project's annual financial statement will be audited annually by an independent auditor acceptable to the WB and the audit report will be submitted to the WB within six months of the fiscal year-end.
- 85.** The FM assessment is concluded when the project's FM arrangements meet the WB's minimum requirements under WB policy and directive on IPF and FM manual. Detailed extracts of the FM assessment are shown in annex 1.

### Procurement

- 86.** Procurement will be carried out in accordance with the WB procurement regulations for IPF borrowers (Borrowers Regulations), dated November 2020; the guidelines on preventing and combating fraud and corruption in projects financed by IBRD loans and IDA credits and grants, revised July 1, 2016; and the provisions stipulated in the financing agreement. Procurement under the project will be carried out according to the arrangements described in annex 1.
- 87.** The MInT will be responsible for procurement implementation. A PIU will be established under the MInT and will be populated with qualified staff to process implementation of project activities. The procurement decision



making process will utilize the internal institutional structure of the MInT, including the tender Eedorsing committee. As the project’s implementing agency for procurement, the MInT will process procurement activities on behalf of the project beneficiary institutions, the ECA (for subcomponent 1.2) and EthERNet (for subcomponent 2.3), and other institutions as necessary. Risk assessment related to procurement implementation has been completed with the main risks and mitigating measures outlined in annex 1. The overall inherent procurement risk of the project is rated High. Factoring that the procurement mitigation is expected to be successfully implemented, the residual procurement risk is considered Substantial.

### C. Legal Operational Policies

	Triggered?
Projects on International Waterways OP 7.50	No
Projects in Disputed Areas OP 7.60	No

### D. Environmental and Social Safeguards

88. Partial privatization of the incumbent telecommunication operator and the opening up of the market to new operators could lead to infrastructure development (such as construction of data centers) which may be financed by the private sector. The project could also stimulate public sector investment in new infrastructure. The likely negative impacts associated with telecommunications could include environmental risks associated with: (a) land clearing for installation of telecommunication facilities; (b) installation of telecommunications systems (for example, antenna/mast erection, cable laying, telephone pole erection, construction of exchange buildings); and (c) operation and maintenance of the telecommunications systems (for example, energy consumption, generation of electronic waste). The main environmental risks are described as follows:

- (a) **Terrestrial habitat alteration (land clearing for installation of telecommunication facilities).** Terrestrial habitats may be altered primarily during the construction of communications infrastructure depending on the type of infrastructure component and proposed location. Potential impacts to habitat may be more significant during construction and installation of linear infrastructure, such as long-distance fixed line cables, as well as access roads to other types of infrastructure along previously undeveloped land.
- (b) **Hazardous materials and waste.** Although telecommunications processes do not entail the use of significant amounts of hazardous materials, the operation of certain types of switching and transmitting equipment may require the use of backup power systems comprising a combination of batteries (typically lead-acid batteries) and diesel-fueled backup generators for electricity. Operations and maintenance activities may also result in the generation of electronic wastes (for example, nickel cadmium batteries and printed circuit boards from computer and other electronic equipment as well as backup power batteries). The operation of backup generators and service vehicles may also result in the generation of used tires, waste oils, and used filters. Transformer equipment may potentially contain polychlorinated biphenyls while cooling equipment may contain refrigerants (potential ozone depleting substances).
- (c) **Emissions to air.** Emissions from telecommunications projects may be primarily associated with the use of backup power generators, and the use of cooling and fire suppression systems. Cooling equipment may contain refrigerants (potential ozone depleting substances).



89. Experience from other WB-financed projects shows that the client's capacity to manage environmental and social risks needs considerable improvement. The client has prepared an Environmental and Social Management Framework (ESMF) which outlines the procedure to be followed in managing the environmental and social risks, a comprehensive description of the anticipated risks and mitigation measures, the implementation arrangement to be put in place, the environmental and social risks, as well as the potential capacity building activities. Besides, the client has prepared an Environmental and Social Commitment Plan (ESCP) to comply with the applicable environmental and social standards of the WB's Environmental and Social Framework.
90. The project will have significant positive social impacts which include: (a) reducing costs and enhanced reliability of digital access; (b) increasing the efficiency of public service delivery through support for digitization of public services; (c) promoting digitization of higher education and thus raising the graduate's preparedness for the digital world; (d) promoting affordable internet coverage in areas that currently have poor access to communications infrastructure and services; and (e) supporting an enhanced digital business environment, potentially leading to more well-paid jobs in the sector and among sectors that make intensive use of digital technologies. Overall the activities connected with the Digital Foundations project will be site specific and will generate impacts that are of moderate significance.
91. The updated project design will not involve any loss of assets and properties and excludes any respective investments. All physical investments directly financed by the project (such as installation of e-portals, data centers, communication rooms, and provision of high-speed broadband connectivity) are expected to be carried out of government-owned/used land or property in existing education, health, and government office facilities and sites. Sub-project sites with potential land acquisition and resettlement impacts will be screened out to exclude them from direct project investment. The project will also finance the design of procedures for future digital infrastructure investments, which may lead to land acquisition downstream. It will provide TA to the ECA to adopt regulatory standards on siting, design, construction and operation of telecommunication infrastructure which will be imposed on private sector operators. Such TA will thus include the development of a Resettlement Policy Framework (RPF) consistent with Environment and Social Standard 5 (ESS5) in a manner acceptable to the WB.
92. As the project will be implemented in different parts of the country that encompass emerging regions where underserved and vulnerable communities reside, social inclusion will be considered. There will be potential risk of social exclusion if equitable distribution of project benefits is not applied among underserved communities in the emerging regions, and vulnerable people and inclusive regulations are not well designed and implemented; always understanding the limited scope of the intervention compared to the massive needs in that regard. This can include gaps in universally accessible digital services and broadband connectivity among vulnerable groups and underserved communities, targeting underserved communities and institutions for project benefits and having inclusive regulations. The potential risk in line with digital ID could be the improper use or sharing of data that could lead to discrimination and lack of trust in the system in the long term. To avoid such risk, the project is designed to support the legal and regulatory preparatory work on digital ID and related topics, such as data protection to safeguard data privacy through a comprehensive legal and regulatory framework.

**The project gender-based violence (GBV) risk was assessed as Moderate.** The project services such as improved internet access, Wi-Fi, and broadband services will benefit many; the potential risk could relate to misuse of the internet



access to facilitate acts that may cause GBV or sexual exploitation and abuse (SEA). Furthermore, the project could engage workers in construction activities. To mitigate related risks, proposed actions include development of a clear code of conduct and ensuring that its staff and contracted workers sign up to it; a development of a code of conduct on use of ICT in university libraries, dormitories, information centers, and other project targets; and content filter for internet use and setting up the grievance system to ensure that incidents related to workers and GBV are well addressed. Overall, as part of the social safeguards tool, the project has developed an ESCP which provides commitments and actions the project will implement in line with the ESSs. A Stakeholder Engagement Plan (SEP), which serves as a guiding tool for consultation, has also been prepared and publicly disclosed on the client's website on February 17, 2021. Additionally, a Social Assessment (SA) and Labour Management Procedure (LMP) proportional to the activities under the project has been approved as part of the ESMF and will be available before Board approval.

93. **Citizen engagement.** The project will promote beneficiaries' participation through intertwining two-way communication with citizen engagement (CE) mechanisms. This approach will help promote transparency and enhance citizens' voice and participation. Intertwining CE mechanisms with communication activities will facilitate beneficiaries' access to information and buy-in and, thereby, generate a broad stakeholder ownership of project activities. These mechanisms include direct consultations with beneficiaries and multi-level grievance mechanisms procedures for uptake and resolution of complaints. Under each project activity, the consultations will be organized with relevant stakeholder groups, such as the private sector actors and the targeted communities. Feedback from the people receiving capacity building support under the project (for instance, under subcomponents 2.2 and 3.1) will be integrated to improve the training quality and outreach, on a continuous basis. Similarly, follow-up on start-ups receiving matching grant support will be undertaken by the PIU, with assistance from the WB project team, to further improve the targeting of the activity. The project will also track the number of people benefiting from digital training and the percentage of women receiving training to ensure that the interventions are gender sensitive. As an indicator of CE, the project will track the user satisfaction with effectiveness and delivery of training received (under sub-components 2.1 and 3.1).

## V. GRIEVANCE REDRESS SERVICES

94. The project will set up a Grievance Redress Mechanism (GRM) for people to report *concerns* or complaints, if they feel unfairly treated or are affected by any of the subprojects. The project will ensure that the GRM is suitable to address more sensitive grievances such as GBV and SEA related issues. Citizens can register complaints about implementation of various development activities, resettlement (if any), and any other perceived abuses of the project. The grievance committee at the various levels will address such complaints, including logging, tracking, and resolving grievances promptly during and after the implementation of the project; a social M&E survey will be conducted to evaluate the impact on vulnerable groups among women. The surveys will use gender-disaggregated data to determine and verify citizen's perceptions of the project's activities and will serve as a tool to define gender or social issues. The recommendations will be used to deepen improvements in the telecom sector.
95. Moreover, Communities and individuals who believe that they are adversely affected by a WB supported project may submit complaints to existing project-level grievance redress mechanisms or the WB's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed in order to address



project-related concerns. Project affected communities and individuals may submit their complaint to the WB's independent Inspection Panel which determines whether harm occurred, or could occur, as a result of WB non-compliance with its policies and procedures. Complaints may be submitted at any time after concerns have been brought directly to the WB's attention, and WB Management has been given an opportunity to respond. For information on how to submit complaints to the WB's corporate GRS, please visit <http://www.worldbank.org/en/projects-operations/products-and-services/grievance-redress-service>. For information on how to submit complaints to the WB Inspection Panel, please visit [www.inspectionpanel.org](http://www.inspectionpanel.org).

## VI. KEY RISKS

- 96. The overall risk to the project is High**, but the potential rewards are also high. There remain several challenges, such as the overall governance fragility, potential political interference in the ECA, lack of cooperation by the management of Ethio Telecom, uncertainty around the outcome of the telecom reform process and the selection of two new operators, the upcoming national elections, the adverse effects of the COVID-19 pandemic and limited capacity in the public sector. The key risks and proposed mitigation measures are discussed below.
- 97. Political and governance risks are High.** The country is undergoing a major transition in government, with elections originally scheduled in 2020, but postponed due to the COVID-19 pandemic, and now scheduled for mid-2021. During the conflict in the Tigray Region, in the north of the country, which began in November 2020, all forms of telecommunication, including internet, were cut off in the region, and access continues to be constrained. No project activities are planned to be undertaken in the Tigray Region and the WBG and development partners continue to monitor the situation closely. Given the past history of state intervention in the telecom sector, political interference remains a substantial risk to the success of this operation. The Ethiopia Growth and Competitiveness Program (P168566), which includes prior actions on telecom in all three phases,<sup>55</sup> provides some degree of policy leverage over the process. Nevertheless, despite these improvements, the residual risk is still considered high, at least until after the elections.
- 98. Macroeconomic risk is Substantial.** Even prior to the onset of the COVID-19 pandemic, which reached Ethiopia in mid-March 2020, the uptick in economic growth that was observed in Ethiopia was forecasted to slow down as the Ethiopian economy remained highly susceptible to external imbalances and shocks. Additionally, high levels of public debt constrain the government's ability to respond to unforeseen events. Macroeconomic imbalances could further reduce the risk appetite of potential investors and may inflate government dependence on revenue from the sector. Difficulties in converting local profits into foreign exchange will be a deterrent to investors, and this will particularly impact the attractiveness of Ethio Telecom to potential private partners (sub-component 1.1). These risks are partially mitigated by the macroeconomic reform program undertaken by the GoE with support from its international development partners, and the fact that the GoE has succeeded in managing the impact of COVID-19 relatively well thus far. Again, the DPF support can act as a counterbalance to macroeconomic risks. The government has made progress with the introduction of a fiscal stabilization program and reform measures that

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<sup>55</sup> An emergency DPO prepared in mid-2020, responding to the COVID-19 pandemic (P174241), also contains a prior action relevant to the adoption by the Council of Minister of the eTransactions Proclamation. It was approved by Parliament on June 4, 2020.



enhance transparency and accountability in public sector procedures and management. The GoE has begun to publish data on macroeconomics through a data portal under the IMF website. The system aims to provide a one-stop publication for essential data. Nevertheless, the residual risk is still substantial.

**99. Sectoral strategies and policies risks are High.** Policy reform in the telecom sector and the broader digital economy has only been initiated since mid-2018, due to the GoE's previous policy of maintaining a monopoly over telecom services. Therefore, the commitment to promoting a private sector-led telecom sector will require not only a systemic policy change but also a process of change management and institutional adjustments. These issues will be partly mitigated through the GoE's strong top-level commitment to the reform agenda, as evidenced by the launch of the request for proposals (RFP) for two new market entrants in November 2020. Furthermore, the communications services proclamation, which was approved by the Parliament on June 2019, establishes an independent communications services regulator, the ECA, and provides the legal framework for telecommunications market liberalization. The PPA for this project is helping the ECA strengthen its capacity to function as an independent, transparent and efficient institution and to foster a competitive enabling environment for the telecom sector. Finally, the DPF prior actions on telecom reform and eCommerce should also help mitigate sectoral and policy risks. The residual risk is still considered high, however, the selection process of two new operators is underway with bids due on April 5, 2021.

**100. Technical design risk for the project is rated Moderate.** Through component 1, the project will help ensure a sound and robust legal and regulatory framework for the partial privatization of Ethio Telecom and liberalization of the sector. For components 2, and although the proposed project proposes mechanisms, such as internet pre-purchase and matching grants that have been used extensively in earlier IDA-financed programs (for example, AFCC2/RI-RCIP3 - Regional Communications Infrastructure Program - Phase 3 (P111432), Digital Malawi Program Phase I: Malawi Digital Foundations Project (P160533), Ethiopia Competitiveness and Job Creation Project (P143302)), their use in Ethiopia is new. This will require preparatory work to familiarize stakeholders with the approach and to gain the support of the private sector. They will support demand stimulation, ensuring citizens and businesses can start benefiting from more affordable and accessible digital services. An additional technical risk arises from cybersecurity threats, which typically involve breaches of government systems and the potential compromise of personal data. As systems cannot be protected in totality, substantial effort and resources will be placed on measures, tools, audits, tests, and capacity building to bolster prevention. In addition, focus will be placed on strengthening incident response through capacity building of government institutions to handle attacks and breaches in real time, control damage, and recover as quickly as possible. These mitigation measures are expected to keep the technical design risk moderate.

**101. Institutional capacity risks for implementation and sustainability are Substantial.** These risks relate, among other things, to the ability of the project to recruit talented and experienced PIU staff and to strengthen the capacity of the PEHAA under the MoF and the ECA to proactively lead the reform process on time. The PEHAA is newly restructured from the former Ministry of Public Enterprises under the MoF, while the ECA is a new entity, created in 2019. There is a substantial likelihood that institutional capacity for implementing and sustaining the operation will be weak at the initial stage, as evidenced by delays in recruitment, which may slow down implementation and the pace for reforms. The telecom-related debt management issues will also be partially mitigated through the support to Ethio Telecom in finding a strategic partner. While residual risks remain assessed



as substantial, they may be lowered as implementation advances and effects of those mitigation measures prove effective.

**102. Fiduciary risks are considered Substantial.** This rating is derived from both FM and procurement assessments.

On FM, there is limited capacity in implementing a WB-financed operation at the MInT. Its past track record has shown challenges in submission of reports (both audited and unaudited). The ECA is also a new entity. At the MoF, there is better capacity and experience in managing the FM aspects of WB-financed operations. The MoF completed recruitment of a transactions advisor (firm), using funds from PPA, through the MoF's COPCD. However, turnover is an issue that has challenged other projects. Internal audit capacity is weak at most public bodies. Because of these issues, the FM risk is considered to be Substantial. On procurement, capacity limitations and process delays are the main risks facing implementation across the system. The COVID-19 pandemic has worsened these risks, as government employees have been required to work from home. During preparation, specific procurement items under the project have been identified and corresponding procurement arrangements are being defined. Given the expectation that the procurements of main investments will be handled by the PIU in the MInT (once the project becomes effective), the inherent procurement risk is considered high. A more exacting assessment of the capacity of identified implementing agencies was carried out before appraisal. The government has also prepared a draft PPSD which details market conditions and corresponding approaches for identified procurable items under the project. Nevertheless, in spite of those mitigation measures, the residual procurement risk is still considered Substantial.

**103. Environmental and social risks are considered Moderate.** The project will not fund any TA on internal reform

process for telecom operations and thus also not on any staffing adjustments to any enterprises. Thus, the potential social risk will mainly be related to social exclusion as well as gaps in client's capacity to manage environmental and social risks and impacts of the sector.

**104. Stakeholder risks are considered Moderate.** The greatest stakeholder risk to the project comes from the market

reform process, under component 1, which holds substantial risks. In particular, the partial privatization process for Ethio Telecom may be opposed by labor unions or other elements in the government. To mitigate these risks, the team is following the MoF's advice to distance itself from the process and let the MoF lead the process, so that it is understood as being Ethiopian led, not imposed by the WB. The WB's involvement is thus limited to financing the transaction advisor. The establishment of an active and informed oversight entity for SOEs, with a capability to independently analyze and assess SOE activities and their operational and financial performance, will help mitigate these risks. In addition, the contracting of TA will strengthen their capacity. Under sub-component 1.2, it is envisaged that the project will assist ECA in developing a communications plan that will seek to gain popular support for the overall market liberalization process, including the introduction of new, foreign investors to the market. The TA to the ECA, will be complemented by in-house WB expertise, and from a multi-donor trust fund established to support the DPF, to provide targeted support on telecom regulation (notably spectrum management) and macro-fiscal and debt management. In view of these mitigation measures, the residual risks are considered Moderate.

**105. Other risks are considered Substantial.** In terms of climate risks, project exposure to climate change impacts is

currently Moderate, but there is potential for high exposure in the future, notably related to variable rainfall and climate-related locust infestations, which may reduce the affordability of telecom services in rural areas. Any



investments indirectly supported by this project, for instance under subcomponents 2.2 and 2.3) will ensure the climate resilience of the infrastructure, for instance by burying fiber underground. This will help mitigate climate risks and can also generate adaptation co-benefits. Policy actions that support the implementation of Ethiopia's ambitious Climate Resilient Green Economy strategy can also help mitigate climate risk. **Security risks** have worsened, in part as a result of the conflict in the Tigray Region, in the north of the country, which started in November 2020, and the large number of IDPs. Residual security risks are considered substantial, but this will be kept under review. Project design and selection of areas of focus will avoid areas with ongoing conflict.



**VII. RESULTS FRAMEWORK AND MONITORING**

**Results Framework**  
**COUNTRY: Ethiopia**  
**Ethiopia Digital Foundations Project**

**Project Development Objectives(s)**

The Project Development Objective is to increase the inclusiveness and affordability of digital services and digital job creation in Ethiopia.

**Project Development Objective Indicators**

Indicator Name	PBC	Baseline	End Target
<b>to increase inclusiveness and affordability of digital services in Ethiopia</b>			
Penetration rate of internet users (fixed and/or mobile) per 100 inhabitants, disaggregated by gender (Number)		18.62	30.00
Penetration rate of internet users (fixed and/or mobile) per 100 inhabitants, who are female (Percentage)		13.03	25.00
Broadband internet prices per month, mobile, in US\$ (Amount(USD))		12.00	2.00
Price of 1 GB of mobile data per month, as a percentage of Ethiopia's GNI per capita (Percentage)		19.50	2.00
<b>to improve digital job creation in Ethiopia</b>			
Increase in the number of jobs created, facilitated or sustained by digital businesses under the project (Number)		0.00	6,500.00
Number of digital economy jobs created for females (Number)		0.00	1,000.00



Indicator Name	PBC	Baseline	End Target
Number of digital economy jobs created for disabled persons (Number)		0.00	65.00
Number of digital economy jobs created for rural persons (Number)		0.00	1,300.00

**Intermediate Results Indicators by Components**

Indicator Name	PBC	Baseline	Intermediate Targets		End Target
			1	2	
<b>1. Digital Economy, enabling legal and regulatory environment</b>					
Climate Indicator: Increase in the number of citizens able to receive alerts via their phone (eg for extreme weather events) (Number)		0.00			10,000,000.00
Number of telecom service licenses awarded by ECA, including class licenses (Number)		0.00			3.00
Percentage of the population covered by at least a 4G network signal (Percentage)		4.84			60.00
Level of market competition, as measured by change in the level of concentration in the provision of broadband telecom services, using the Herfindahl-Hirschman Index (HHI). (Number)		10,000.00			5,000.00
<b>2. Digital Government and Connectivity</b>					
Number of Government services		1.00			4.00



Indicator Name	PBC	Baseline	Intermediate Targets		End Target
			1	2	
accessible from the ePortal (Number)					
Number of Ministries, Departments and Agencies served with enhanced connection to broadband internet, under the project (Number)		0.00			200.00
Number of universities and TVETs connected to broadband internet (Number)		30.00			200.00
Number of students receiving access to enhanced internet services, under the project, of which percentage female (Number)		0.00			50,000.00
Percentage of students receiving access to enhanced internet services, under the project who are female (Percentage)		0.00			30.00
Number of senior government officials receiving training in digital economy policies, of which percentage female. (Number)		0.00			2,000.00
Percentage of senior government officials receiving training under the project who are female (Percentage)		0.00			40.00
Citizen engagement indicator: Percentage of beneficiaries receiving training under the project who expressed satisfaction (Percentage)		0.00			60.00
<b>3. Digital Business and Entrepreneurship</b>					
Number of owners of offline SMEs and farmers receiving benefits (eg digital platform training, access to digital		0.00			6,250.00



Indicator Name	PBC	Baseline	Intermediate Targets		End Target
			1	2	
devices) under the project (Number)					
of which female persons as the beneficiaries (Number)		0.00			950.00
Number of digital start-ups created and received funding that use a tech solution for commercial purposes (Number)		60.00			450.00
of which there is at least one female in the founding team (Number)		5.00			70.00
Number of digital platform and data firms operating in the country, including MSMEs, to contribute to digital economy growth (Number)		32.00			170.00
<b>4. Project Management</b>					
Percentage of grievances registered that receive an adequate response within 30 days (Percentage)		0.00			80.00
User satisfaction with the effectiveness of the selected public digital services (Percentage)		0.00	50.00	60.00	70.00

**Monitoring & Evaluation Plan: PDO Indicators**

Indicator Name	Definition/Description	Frequency	Datasource	Methodology for Data Collection	Responsibility for Data Collection
Penetration rate of internet users (fixed and/or mobile) per 100 inhabitants,	This indicators, which is based on household survey	Annual	ITU / ECA / household	The baseline data, from ITU (see	ECA



disaggregated by gender	data. measures the number of people who have used the internet at least one within the last month (internet users), as a percentage of the population aged 15+.		surveys	<p><a href="https://www.itu.int/net4/ITU-D/icteye/#/topics/2001">https://www.itu.int/net4/ITU-D/icteye/#/topics/2001</a> ) is that there were 18.62 people using the internet for 100 inhabitants at the end of 2018. Assuming a population at that time of 108 million, that gives an estimated 20,109,600 internet users (ie 18.6 internet users per 100 population). The increase will be measured from this baseline with a target to reach 30 per 100 by the close of the project. Insofar as survey data allows, the penetration rate of internet users will be further disaggregated by age, by urban/rural divide and for disabled persons, as well as for gender</p>	
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<p>Penetration rate of internet users (fixed and/or mobile) per 100 inhabitants, who are female</p>	<p>This indicator, which is based on household survey data. measures the number of women and girls who have used the internet at least one within the last month (internet users), expressed as a percentage of the population aged 15+ (ie penetration rate)</p>	<p>Annual</p>	<p>ITU / ECA / household survey</p>	<p>The baseline data, from ITU (see <a href="https://www.itu.int/net4/ITU-D/icteye/#/topics/2001">https://www.itu.int/net4/ITU-D/icteye/#/topics/2001</a>) shows there were 18.62 people using the internet for 100 inhabitants at the end of 2018. Assuming a population at that time of 108 million, that gives an estimated 20,109,600 internet users. The increase will be measured from this baseline. Unfortunately, ITU does not provide estimates for female internet users (as no household surveys have been carried out to date in Ethiopia). But based on experience in similar countries, we may presume that around 35 per cent of internet users in Ethiopia are female, which would give a base line of</p>	<p>ECA</p>
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				7,038,360 million (ie 13.0 female internet users per 100 population). The team will seek to conduct an ICT household study at an early opportunity. The target is to grow this to 25 per 100 females by the end of the project; thereby reducing the gender gap so that over 45 per cent of internet users are women.	
Broadband internet prices per month, mobile, in US\$	The price of 1 GB per month of mobile data, expressed in US\$	Annual	Price data from cable.co.uk. GDP data from World Bank.	Mobile broadband data for 1 GB per month data usage, based on average of sampled prices.	ECA
Price of 1 GB of mobile data per month, as a percentage of Ethiopia's GNI per capita	Price of 1 Gigabyte of mobile data, per month, expressed as a percentage of GNI per capita (in the previous year)	Annual	Cable.co.uk for the price of mobile data. World Bank for GNI per capita.	Price for 1 GB of data based on average of sampled prices (cable.co.uk methodology) and converted to US\$. GNI per capita, Atlas method, in current US\$,	ECA / WB



				divided by 12 to provide a monthly figure. For 2017, using a figure of US\$61.67 per month.	
Increase in the number of jobs created, facilitated or sustained by digital businesses under the project	Digital economy direct jobs are the salaried staffs hired by a digital firm. Digital economy indirect jobs are the jobs facilitated and sustained by digital businesses, e.g. working as a supplier or individual contractor for digital businesses and earn a commission from them.	Annual	PIU M&E document	The grant applications in component 3 window 2 will list out number of direct and indirect employees: e.g. Gebeya Ethiopia stated they have 14 tech gig-workers currently working for a client; while the more mature Ride Ethiopia has 750 taxi drivers. Assuming there are on average 50 direct and indirect jobs for each digital firm, component 3's window 2 will on average benefit 125 digital firms. This gives us an estimate of job creation for $125 * 50 = 6250$ . Adding window 1's expected beneficiary size of 100-300 digital	PIU



				start-ups owners, this gives us a target of approximate 6,500 jobs to be created, facilitated or sustained under this project.	
Number of digital economy jobs created for females	Female direct and indirect jobs	Annual	PIU M&E document	The grant applications in component 3 will list out number of direct and indirect employees that are benefiting from the grants (and female breakdown)	PIU
Number of digital economy jobs created for disabled persons	Direct and indirect jobs created for disabled persons	Annual	PIU M&E document	The grant applications in component 3 will list out number of direct and indirect employees (and disabled persons breakdown)	PIU
Number of digital economy jobs created for rural persons	Direct and indirect jobs created for persons not located in Addis Ababa or other secondary cities. Can include persons from peri-urban's rural areas of large towns.	Annual	PIU M&E document	The grant applications in component 3 will list out number of direct and indirect employees (and rural persons breakdown)	PIU



Monitoring & Evaluation Plan: Intermediate Results Indicators

Indicator Name	Definition/Description	Frequency	Datasource	Methodology for Data Collection	Responsibility for Data Collection
Climate Indicator: Increase in the number of citizens able to receive alerts via their phone (eg for extreme weather events)	This indicator is based on the increase in the number of cellular mobile subscribers in the country. The service of extreme weather alerts (climate indicator) is typically delivered by short message service (SMS), and is therefore available on all phones in use -- 2G, 3G or 4G.	Annual	ITU / GSMA / ECA	The methodology used for this indicator is to measure the increase in cellular subscriptions, starting from the baseline of 31 December 2019. According to GSMA data (in turn based on Ethio Telecom statistics), there were some 36,328,800 unique mobile subscribers as at 31 December 2019 (ie taking account of multiple SIM card ownership). The increase in mobile subscriptions will be measured from this baseline.	ECA
Number of telecom service licenses awarded by ECA, including class licenses	Number of awards of telecom operator licenses in Ethiopia by ECA, including class licenses. Thus, this	Annual	ECA	Total number of valid licenses awarded (excluding licenses cancelled)	ECA



	would include both full service licenses as well as class licenses awarded to internet service providers, satellite operators, wholesale fiber operators etc.				
Percentage of the population covered by at least a 4G network signal	Percentage of the population covered by a mobile broadband signal that is 4G or higher (ie 4G and 5G)	Annual	ECA, GSMA, licensed operators	Based on an analysis of mobile coverage -- ie linking together maps of population density with maps of area covered by 4G and 5G cellular mobile towers.	ECA
Level of market competition, as measured by change in the level of concentration in the provision of broadband telecom services, using the Herfindahl-Hirschman Index (HHI).	The Herfindahl-Hirschman Index (HHI) is a commonly accepted measure of market concentration. It is calculated by squaring the market share of each firm competing in a market and then summing the resulting numbers. It can range from close to zero to 10,000, where zero equals perfect competition and 10'000 is complete monopoly.	Annual	GSMA / ECA	The HHI is calculated by squaring the market share of each firm competing in a market and then summing the resulting numbers. It can range from close to zero to 10,000, where zero equals perfect competition and 10'000 is complete monopoly.	ECA
Number of Government services accessible from the ePortal	This indicator measures the number of eGovernment services that are accessible	Annual	PIU / MInT	Based on a survey of actual government websites providing	MInT / PIU



	from an official eGovernment portal (for instance using the domain name .gov.et). There is no specification of the type of Government service but it might, for instance, include birth, marriage or death certificates, ID cards or passports, applying for visas, filing taxes,			transactional services. The only eGovernment service available online as at 31 December was application for eVisas (see: Number of Government services accessible from the website at: <a href="https://www.evisa.gov.et/">https://www.evisa.gov.et/</a> ).	
Number of Ministries, Departments and Agencies served with enhanced connection to broadband internet, under the project	Number of ministries, departments and agencies connected to broadband internet. The count measure locations (ie, if the same ministry has more than one site, it is counted multiple times). The definition of broadband internet here would include digital subscriber line, ethernet or fiber. It would also include a 3G, 4G or 5G mobile signal if fixed line connection were available.	Annual	PIU	Based on locations served under tenders for pre-purchase of internet capacity, under the project. Data on total number of Ministries, Departments and Agencies (MDAs), ie including those served by the market, without project intervention, would also be collected.	PIU, in conjunction with bidders winning tenders.
Number of universities and TVETs connected to broadband internet	This indicator measures the number of higher education institutes provided with broadband internet. The	Annual	EthERNet	Number of universities with a high-speed internet connection. Note, this would not be	EthERNet.



	<p>definition of a higher education institution includes TVETs and Research Institutes as well as Universities, and it covers the number of locations (ie if a university has two separate campuses in different locations, it would be counted twice). The definition of connection would be a fixed line broadband connection (eg DSL, Ethernet, fiber) and would also be extended to cover 4G or above mobile signal, if this was available at an unmetered tariff. The indicator would be a measure of support provided "under the project", so would be mainly limited to the increase under the program administered by EthERNet.</p>			<p>restricted to those provided, under the project, but effectively it is the support offered to EthERNet under the project which will enable it to increase its membership (including in partnership with EU AfricaConnect 3.</p>	
<p>Number of students receiving access to enhanced internet services, under the project, of which percentage female</p>	<p>Number of students provided with enhanced internet access as a result of the project. This covers students at universities and TVETs that receive</p>	<p>Annual</p>	<p>EthERNet</p>	<p>Students enrolled at universities served with enhanced internet access under the project.</p>	<p>EthERNet</p>



	additional bandwidth under the project as well as beneficiaries of campus wifi networks.				
Percentage of students receiving access to enhanced internet services, under the project who are female	Number of students provided with enhanced internet access as a result of the project. This covers students at universities and TVETs that receive additional bandwidth under the project as well as beneficiaries of campus wifi networks.	Annual	EthERNet	Students enrolled at universities served with enhanced internet access under the project, who are female. In 2014, women made up around 30 percent of all tertiary students (UIS).	EthERNet
Number of senior government officials receiving training in digital economy policies, of which percentage female.	Number of senior government officials receiving training in digital skills, under the project	Annual	PIU	Count of participants in training courses organised under the project, including virtual training.	PIU
Percentage of senior government officials receiving training under the project who are female	Percentage of participants in training for senior government officials, provided under the project, who are female	Annual	PIU	Based on a count of participants in training courses provided to government officials under the project, including virtual training, who are female.	PIU
Citizen engagement indicator: Percentage of beneficiaries receiving	Based on feedback forms received from beneficiaries	Annual (but	PIU	Based on feedback forms	PIU



training under the project who expressed satisfaction	receiving training, this indicator will measure the percentage reporting themselves to be satisfied or very satisfied with the quality and content of the training received.	updated from feedback forms as received)			
Number of owners of offline SMEs and farmers receiving benefits (eg digital platform training, access to digital devices) under the project	This indicator measures the number of users of digital platform and digital devices that receive benefits for productive purposes and generate income.	Annual	PIU's M&E document: This indicator is one of the conditions to receive component 3's grant window 2	Component 3 window 2 grant application has this information annually.	PIU
of which female persons as the beneficiaries	Female breakdown of the indicator	Annual	The grant application for window 2 should contain female persons that will receive benefits (e.g. training, digital device)	PIU M&E document	PIU



<p>Number of digital start-ups created and received funding that use a tech solution for commercial purposes</p>	<p>Number of digital startups with HQ in Ethiopia receiving private funding from Angel, Early Stage VC, Product Crowdfunding or, Seed round. This indicator is also consistent with DE4A scorecard targets. Baseline figures estimated from the Deloitte Digital Economy assessment commissioned by the project.</p>	<p>Annual</p>	<p>World Bank DE4A Scorecard</p>	<p>Project M&amp;E document</p>	<p>PIU</p>
<p>of which there is at least one female in the founding team</p>	<p>Number of tech start-up's founding team that has at least one woman. This figure for AFR is estimated at 5%-12%, and this figure is estimated to be even lower for Ethiopia right now.</p>	<p>Annual</p>	<p>PIU's M&amp;E document</p>	<p>The grant application for window 1 should contain whether there is female in the founding team.</p>	<p>PIU</p>
<p>Number of digital platform and data firms operating in the country, including MSMEs, to contribute to digital economy growth</p>	<p>This indicator includes all sizes, stages and ownership types (both foreign and local) of platform-based and data-driven firms not just start-ups. Platform and data-driven business models are essential to spur digital innovation and digital economy growth. This indicator is also consistent with DE4A scorecard</p>	<p>Annual</p>	<p>World Bank DE4A Scorecard Baseline figures estimated from the Deloitte Digital Economy assessment commissione</p>	<p>PIU records and data from JCC</p>	<p>PIU</p>



	targets.		d by the project.		
Percentage of grievances registered that receive an adequate response within 30 days	This indicator is based on the number of grievances or complaints received by the project implementation unit and expresses the percentage of those that are addressed, with a response to the complainant, within 30 days	Annual	PIU grievance redress system	PIU monitoring of grievance redress system, and time taken to respond.	PIU
User satisfaction with the effectiveness of the selected public digital services	This indicator will be measured using the citizen feedback mechanism for selected digital public services to be developed under Component 2.1, and will focus on the level of satisfaction with convenience and ease of access	Annual. Starting on Year 3 of project implementation.	PIU	PIU will collect this information from MInT to feed the project progress report and the results framework. Assuming a five level scale, user satisfaction will be the percentage of responses in the top two levels (eg satisfied and very satisfied).	ECA





## ANNEX 1: Implementation Arrangements and Support Plan

### COUNTRY: Ethiopia Ethiopia Digital Foundations Project

1. The project is expected, as from the time of effectiveness, to be under the leadership of the MInT, coordinating the work of the different implementing agencies including the MoF (including PEHAA), ECA, and EthERNET. At project initiation, the COPCD, within the MoF, has been acting as the PIU in a transitional capacity, during the preparation phase and for implementation of the PPA. The COPCD is supporting the recruitment of: (a) project staff for the future PIU in MInT, and individual experts to support the ECA, as well as the transaction advisory firm for the partial privatization of Ethio Telecom, managed by the PEHAA within the MoF. The ECA will partner with the MInT as the implementing agency for sub-component 1.2, while EthERNET will partner with the MInT as the implementing agency for activities targetted at the higher education sector in sub-component 2.3. The MInT will work closely with the MoP on the coordination of legal and regulatory support to digital ID under subcomponent 1.3c. All other activities will be directly implemented by the MInT. As a new ministry, the MInT does not have a strong history of implementing a previous World Bank ICT project, though its predecessor ministries (MCIT and MoST) had previously worked with the WB. The MInT is expected to have reasonable capacity to deliver various components. It is envisioned that the PIU will manage the day-to-day activities of the project, including fiduciary functions, under the direction and guidance of the MInT.

#### FM

2. An FM assessment was conducted at the MInT, the ECA, and the MoSHE in accordance with the FMM for WB Investment Project Financing operations issued on February 10, 2017 and the supporting guidance note (February 28, 2017). The objective of the FM assessment was to determine whether the implementing entities have adequate FM systems, arrangements and related capacity; to identify risks and mitigation measures; and design and agree on FM arrangements for the project. The arrangements include the entity's system of planning and budgeting, accounting, internal controls, funds flow, financial reporting, and auditing.

#### Country PFM context

3. At the federal level, PFM is mainly governed by the Financial Administration Proclamations, the Federal Income Tax Proclamation, and the Public Procurement and Property Administration Proclamation issued by the federal government along with the supporting documents issued that include directives and manuals. PFM reform in Ethiopia has shown some progress. In the last 16 years, the GoE has been implementing a comprehensive PFM reform through the expenditure management and control sub-program of the government's civil service reform program. The legal framework is established; reforms have been carried out in various areas such as medium-term expenditure framework, government budget preparation and administration, cash management and disbursement, government accounting and reporting, procurement and property administration, internal audit information system (Integrated Budget and Expenditures [IBEX] & IFMIS), and financial transparency and accountability. To further enhance these reforms and introduce new reforms, the government (led by the MoF), has prepared and is implementing a five-year PFM strategy, which is financed by the government and development partners for the period 2017/18-2021/22.



4. The Public Expenditure and Financial Accountability (PEFA) assessment for 2018 has been conducted for Ethiopia. The PEFA assessment covered the Federal Government of Ethiopia (FGE) and six regions (Oromia, Tigray, Amhara, Southern National Nationalities and People’s Region [SNNPR] and Somali, and the City of Addis Ababa). At the federal level, the assessment covered federal budgeted units, extra budgetary units and funds, public corporations, sub-national governments in so far as they affect the federal government assessment, Office of the Federal Auditor General (OFAG), and parliament. The draft 2018 PEFA assessment for the federal government in general notes good performance in the areas of budget classification, comprehensiveness of financial reports on government operations, good recording and reporting of debt, strong internal controls on non-salary expenditure, and credibility and integrity of the financial data. Weaknesses remain in the areas of expenditure and revenue composition outturn, public access to financial information, fiscal risk reporting, public investment/asset management, lack of medium-term perspective in expenditure budgeting, internal audit, and procurement.

### Financial Implementing Entities

5. The project will be implemented under the leadership of the MInT, building upon the initial work under the PPA led by the MoF. The MoF implemented activity (subcomponent 1.1) is envisaged to be completed during the PPA period.<sup>56</sup>

6. This FM assessment covered the MInT, ECA, and MoSHE. The MInT will be responsible for the overall FM of the project. This includes, but is not limited to, the management of the designated account and the ETB account, the transferring of funds to other implementing entities, the responsibility for producing regular financial reports, and facilitating the annual audit of the project account. It will ensure that acceptable FM arrangements and systems are in place and are well documented in the FMM. It will also be responsible for oversight and coordination of the project FM aspect and for the funds transferred to it. Federal-level implementing entities (that is, ECA and MoSHE) will be responsible for the funds transferred to them, and will set up systems and account for the funds they manage and will report on fund utilization to the MInT.

### Planning & Budgeting

7. **Budget preparation.** The budgeting process of the three implementing entities’ (MInT, ECA, MoSHE) follows the FGE’s budgeting procedure and calendar. As indicated in the 2018 PEFA, a clear annual budget calendar exists in the FGE. The federal budgeting process usually starts with issuing the Budget Call Circular (BCC) to the budgetary units. Based on the BCC and the budget manual, the budgetary units prepare their budgets in line with the budget ceilings and submit these to the MoF within six weeks following the budget call. The budgets are reviewed at first by the MoF and then by the Council of Ministers. The final recommended draft federal budget is sent to Parliament at least one month before the start of the new year and is expected to be cleared at the latest by end of the fiscal year.

8. The three entities received the budget notification for Ethiopian Financial Year (EFY) 2013 from the MoF in the beginning of July 2020. All entities have prepared an action plan and submitted it to the MoF. The total

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<sup>56</sup> The latest IFR dates from October 10, 2020, and documents expenditure worth US\$186,100 (around 3.1 percent). However, that same month, a contract worth US\$4.3million for the privatization transaction advisor was signed, so disbursement is expected to increase substantially.



approved budget for EFY 2013 for the MInT is ETB 1,260,563,022 (recurrent ETB 471,667,282 and capital ETB 788,895,740), the ECA's budget is ETB 124,262,548.54 (only recurrent budget), and the MoSHE's budget is ETB 1,385,841,400 (recurrent ETB 379,227,400 and capital ETB 1,006,614,000). All the three entities have recorded the annual budget in their accounting system.

9. **Budget performance.** In EFY 2012, the MInT utilized 73.67 percent of its capital budget of ETB 661,600,000 and 54 percent of its recurrent budget of ETB 448,724. The MoSHE utilized 77 percent of its recurrent budget of ETB 294,720,117.15, 14 percent of the capital budget of ETB 603,991,000.00, and 69 percent of its project budget (for new university construction) of ETB 3,524,376,426.50. Since the ECA was established only in mid EFY 2012, the MoF only allocated an operating budget and as such budget performance was not assessed. The low budget utilization for recurrent cost needs attention and redress. The project will factor this issue and identify ways to address it.

10. **Budget control.** The budget control both at transaction and reporting levels is found to be reasonable at the three entities. Request for payments is tracked against the budget balance before payment is effected. Comparison of budget with actual expenditure is prepared monthly and major variances are reviewed by the management and explanations and justifications are provided. However, the MInT audit report revealed significant budget overruns without making budget transfers. This is a key lesson learned for the project and will be mitigated as such.

11. **Budget arrangement for the project.** The project will follow the FGE's budgeting procedure and calendar. The PIU to be established at the MInT, in consultation with the implementing entities, will prepare a consolidated Annual Work Plan and Budget (AWPB) for the project, based on the project's objectives, resources, costing estimates, past trends, and so on. The AWPB will identify the activities to be undertaken by implementing entities as well as spending categories. The project budget preparation should be prudent, realistic, and made with professional estimates to avoid unrealistic budgets. Once the AWPB is approved by the PSC, it will be submitted to the WB, no later than March 31st of each year, for No Objection. The project annual budget will be proclaimed under the MInT. The project will ensure that there is robust budget monitoring and control mechanisms in place. Budget monitoring system will be at transaction level (checking availability of budgets before approving payments), at the system level (using the accounting system/software in place to flag or identify or lock budget overruns and underspends as appropriate), and at the reporting level (using quarterly IFRs). At the reporting level, the budget utilization of the project will be monitored at least quarterly and budget variances will be adequately explained and justified through the quarterly IFRs. These budget preparation and budget monitoring arrangements will be detailed out in the FMM for the project, to be developed within three months of project effectiveness.

### Accounting & staffing

12. **Basis of accounting.** All the three entities follow the government accounting system. The Ethiopian government follows a double entry bookkeeping system and modified cash basis of accounting, as documented in the government's accounting manual.

13. **Accounting manual.** The government's accounting manual provides detailed information on the major accounting procedures. The Financial Administration Proclamation, regulation and all related directives, and accounting manuals are available at the three entities for references, both as soft and hard copies.



14. **Accounting system.** An IFMIS is being rolled out at selected federal budgetary units. An IBEX is in use in other public bodies where the IFMIS is not yet rolled out. The 2018 PEFA noted that the IFMIS is a superior and modern system compared with IBEX with several advantages including: (a) it meets international standards capable of interfacing/integrating with other systems; (b) procurement is included in the property administration module; (c) it can accommodate modified and accrual accounting methods; (d) it has an easier fund management system; (e) it has easier budget and cash management, bank practice, and reconciliation; and (f) it can be integrated with bank and tax systems. In addition, audit software can be integrated/interfaced with the IFMIS to strengthen the oversight element in the software. At the MInT and MoSHE, the IFMIS is rolled out and in use while at the ECA, IBEX is in use (as it is a newly-established public body). Transaction recording was up to date at the three entities at the time of the assessment.

15. **Staffing.** At the MInT, the finance directorate is responsible for the accounting and reporting tasks. The directorate has an adequate number of accounting staff. Led by a director, there are about 22 accounting staff (20 for accounts and 2 for budget control). Property management and internal directorates have a further 8 and 6 staff, respectively, including the directors. Most of the staffs have a BA degree and above. As a newly established public body, the ECA has not yet fully recruited and assigned the staff required at finance, internal audit and procurement and property management directorates. In its finance directorate, only three accountants out of the required 13 are currently recruited and assigned (as of November 2020). The required staff in internal audit and procurement/property directorates are seven and six, respectively, but positions were still vacant. Budget has already been allocated for all vacant positions and the management has started the recruitment process to fill all the vacant positions. It is required to fill all the vacant positions. Regarding the MoSHE, including the director, the finance directorate has seven staff, budget directorate has three staff, procurement directorate has 3 staff, and property management directorate has 6 staff. The WB will review these staffing arrangements further during implementation.

16. **Accounting and staffing arrangement for the project.** The GoE's accounting policies (modified cash basis) and procedures will apply to the project. However, to ensure smooth implementation of the project, as part of the PIM, the project will have its own FMM-to be developed within three months of project effectiveness-which will largely follow the government accounting manual, depicting all accounting policies, procedures, budgeting internal control issues, financial reporting, fund flow, and external audit arrangements. A separate account for the project will be maintained at the three implementing entities to ensure smooth transaction recording and reporting. Accounting software currently being used at the entities can also be used for the project as long as it allows the project transactions and accounts to be shown separately and enables easy reporting of the project financial activities. A chart of accounts, which will accommodate the requirements of the project, will be designed. The existing accounting software should be customized to accommodate the reporting requirement of the project. If these are not possible, then a computerized accounting system, such as the Peachtree accounting software will be adopted for the project. With respect to staffing for the project, one FMS, one accountant, and one cashier secretary will be assigned for the PIU at the MInT and one FMS each will be recruited or assigned at the ECA and MoSHE to handle the project accounts. The recruitment and or assignment of these staff should be completed within three months following effectiveness of the project.

17. For component 3, an MGM will be developed before the first disbursement is made to the beneficiaries/digital start-ups. The manual will provide guidance including FM procedures for overall implementation of the grants of both windows. This manual will provide detailed guidelines on overall



management and administration of grants and will incorporate essential details, including management, operation, and FM of the grants, with clear and transparent grant access conditions, and verification protocols. On FM aspects the following issues will need to be dealt with in depth in the manual: -

- Accounting procedures and policies on the use of the funds
- Eligible and ineligible expenditures
- Budgeting arrangements including procedures to monitor budget and budget execution
- Fund flow mechanisms and banking arrangements including frequency and mode of disbursements to beneficiaries
- Reporting arrangements including the form, frequency, timing and content of financial reports;
- Key internal controls to be established
- Audit arrangements
- Selection procedures of beneficiaries
- Monitoring and follow-ups in terms of FM performances

18. The MInT will ensure that each selected beneficiary has acceptable FM systems and procedures in line with the manual as well as the project FM Manual. Beneficiaries should maintain minimum acceptable FM systems and arrangements before agreements are entered with them. The internal auditor and finance team of the MInT will visit, on a quarterly basis, the beneficiaries and ensure that due diligence is being maintained with respect to the funds of this project.

#### **Internal control and internal audit**

19. **Internal control.** Internal control comprises the entire system of control, financial or otherwise, established by management in order to: (a) carry out the project activities in an orderly and efficient manner, (b) assure adherence to policies and procedures, and (c) safeguard the assets of the project and secure as far as possible the completeness and accuracy of financial and other records. The 2018 PEFA assessment for the federal government found that the general internal controls for payroll and non-salary expenditures are reasonable at all levels. The government internal control procedures are incorporated in the Financial Administration Proclamation, regulation, directives, and various manuals (budget, accounting, internal audit disbursement, cash management, procurement, and so on). The assessed entities are implementing the government internal control procedures. There is segregation of duties at these entities (the functions of preparing, certifying, and approving payments, and ordering, receiving, and accounting for purchases are clearly segregated). Control over payroll is strong; monthly bank reconciliation is performed for all bank accounts and is up to date. Cash count is conducted monthly and reconciled with ledger balance. At the MInT and MoSHE, a fixed asset register and stock cards are maintained in the IFMIS; an inventory (fixed asset and stock) count is conducted once a year and reconciled with the register. It is expected that these similar control procedures will be applied at the ECA once the staff placement at accounts, budget, property management and internal audit, as per the structure, is finalized. However, the Bank takes notes of audit findings for the MInT and MoSHE, which are reported in the external audit section below. These weaknesses need to be addressed and will be followed up during implementation.



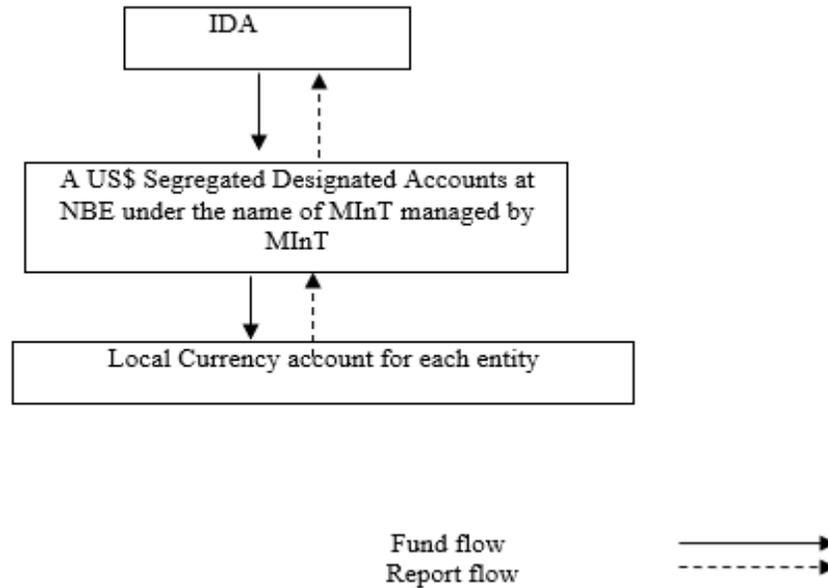
20. **Internal audit.** At the federal level, the inspection directorate of the MoF oversees the internal audit function across all budget institutions. To enhance independence, internal auditors for federal budgetary units are recruited and placed by the inspection directorate of the MoF and are administratively accountable to the director while functionally accountable to their budgetary unit. The 2018 PEFA commented that the internal audit function at the federal level needs further improvement. As per the assessment, there is a wide internal audit coverage across most budget units, but adherence to internal standards needs improvement. Majority of planned internal audits are carried out though the plan is not based on preliminary risk assessment. The international standards are recognized and applied but the internal audit does not focus on evaluating the effectiveness of the internal control system but is rather assuring compliance to the rules, legislation and procedures.

21. The internal directorates at the MInT and MoSHE have five and six internal auditors, respectively, including the director. As per the structure, the internal audit and risk management directorate at the ECA will have seven auditors including the director although not as yet recruited and assigned. The internal auditors at the MInT and MoSHE have prepared the annual audit plan; the audit coverage for the previous year was found to be satisfactory. Both directorates issued internal audit reports as required and submitted it to the entities' management and the MoF. Internal audit manual, internal audit reporting manual, and performance audit manuals which are prepared by the MoF are available for reference both as soft and hard copies.

22. **Internal control and internal audit arrangement for the project.** The government internal control procedures will be applied to the project. Furthermore, the project's FMM will incorporate detailed control procedures specific to the project. The internal audit directorates at the three entities will incorporate the project audit in their annual audit plan and review the project's books regularly and produce separate audit reports or include in their consolidated reports. The WB will have access to these reports during implementation. Copies of the project documents (PAD, PIM, Financing Agreement, FMM) will be provided to the internal auditors for reference.

### **Funds flow and disbursement arrangements**

23. **Funds flow and disbursement arrangements for the project.** The project will follow Channel Two fund flow mechanism of the government whereby funds from IDA will flow to the MInT and then to the ECA and MoSHE. IDA funds will be deposited into a separate US. dollar designated account to be opened at the NBE and managed by the MInT. The authorized ceiling of the designated account will be two quarters of forecasted expenditure based on the approved AWPB. Funds from the designated U.S. dollar account will be further transferred to a pooled ETB account opened for the MInT. The MInT will then transfer funds to other entities implementing parts of the project as appropriate. The fund flow arrangement for the project is summarized in the following chart.



24. **Disbursement methods.** The project may follow one or a combination of the following disbursement methods: designated account, direct payment, reimbursement and special commitment. The project will use report-based (IFR based) disbursements for disbursing funds to the designated account. Disbursement will be made quarterly and cover cash requirements for the next six months based on the forecasts reported in the IFRs.

25. **Eligibility.** Eligible expenditures are those expenditures incurred in accordance with the financing agreement and AWPB (by activities or components or categories). However, special attention is required on grants. The FM manual and grants manual will clearly document the basis of recognition of grants to beneficiaries/digital start-ups, that is, the eligible expenditures. It will determine whether the funds disbursed to beneficiaries/digital startups is accounted as expenditure (immediately when the disbursements are made) or accounted as advance when disbursements are made which will later be converted to expenditures when documents or reports are made (that is, when cleared/settled/accounted). In both cases clear tracking and control mechanisms will need to be established.

26. **Disbursement condition.** The MInT will develop and submit for the WB’s no objection a grants management manual / grants manual that will provide detailed guidelines on how selection, management, implementation, and other procedural issues of grants<sup>57</sup> made to beneficiaries/digital start-ups are managed or administered. In addition, a disbursement Condition will also be set for the CERC (Component 5). The MInT will develop and submit for the Bank’s No Objection an operating manual for the CERC that will provide detailed guidelines on management, implementation and other procedural issues of emergency response.

<sup>57</sup> **Grant fund:** Funds amounting to US\$35 million have been allocated to grants under component 3. Window 1 (USD \$10 million) is a co-investment grant aimed at helping digital start-ups. This window would target digital entrepreneurs via a matching grant mechanism. Window 2 (US\$25 million) is aimed at incentivizing digital businesses to provide training, digital devices and other support to Ethiopians to participate in the digital economy. This will be achieved through providing Digital Adoption and Inclusion Grants to help offset some of the costs incurred by the digital businesses as they reach out, train, and/or provide digital devices to individuals.



27. **MGM.** As noted above, an MGM will be developed before the first disbursement is made to the beneficiaries/digital start-ups under Component 3. Funds have been allocated for the preparation of an MGM. The MInT is responsible for the preparation of the manual. The manual will provide guidance including FM procedures for overall implementation of the grants of both windows and will include essential FM and disbursement procedures/arrangements.

### Financial reporting

28. **Government reporting.** Budgetary units at the federal level prepare monthly financial reports and submit them to the MoF within two weeks after the end of the month. The monthly financial reports include revenue and expenditure reports, receivables, payables reports, transfers and trial balances. Bank statements and bank reconciliation statements are also incorporated in the reports. All the three assessed entities follow the government reporting system. They all submit the monthly financial statements to the MoF as soft and hard copies within the stipulated deadline (within 15 days after the month end). The three assessed entities closed the EFY 2012 accounts and submitted them to the MoF and OFAG.

29. **Financial reporting arrangement for the project.** Quarterly IFRs will be required from the MInT for the financial activities of the project. Each entity will prepare quarterly financial reports of the project component they implement and submit them to the MInT. The MInT as a lead entity will then consolidate these reports with its own and prepare a project IFR and submit it to the WB within 45 days after the end of each quarter. The contents of the IFR will include a narrative report, a statement of sources and uses of funds, a statement of uses of funds by project activity/component, designated account activity statements, cash flow statements including a six-month cash forecast, trial balances, and other related schedules. The format and content of the IFR has been agreed with the WB.

30. The project will also prepare the project's annual accounts/financial statements within three months after the end of the accounting year in accordance with accounting standards acceptable to the WB and submit them to the project's external auditors.

### External Auditing

31. **Entity audits.** The OFAG audits the annual financial statements of the federal budgetary units. The OFAG audit coverage at the federal level reaches 100 percent. The OFAG audited the financial statements of the MInT and MoSHE for the year ended July 7, 2019 and issued the report. Since the ECA was established only in mid EFY 2012, the first external audit will be for the year ending July 7, 2020. The OFAG has not yet carried out the audit for that year. The OFAG issued an adverse opinion and a qualified opinion for the MInT and MoSHE, respectively. Major qualification points for the MInT were coding errors that were made during transaction recording for ETB 25,640,037.90; procurement of goods and services amounting to ETB 721,057 without properly following the public procurement and property administration proclamation; regulation and directive; payment of training expenses without an attendance sheet; outstanding receivable and payable balances of ETB 364,047,012.71 and ETB 143,752,122.37, respectively, at the end of the fiscal year; and over-budget expenditure of ETB 7,717,673.66 without making budget transfers. The qualification points for the MoSHE were outstanding receivable and payable balance of ETB 439,199,933.40 and ETB 1,630,538.68, respectively, at the end of the fiscal year and procured goods amounting to ETB 1,709,442 were received without first verifying the specification by the TC. The WB notes



these risks and will devise ways to mitigate such risks in the project audit arrangements. In addition, the WB will follow up on the resolution of the findings and recommends time-bounded action plans be prepared to follow up and address the findings.

32. **External audit arrangement for the project.** For the project, the MInT will ensure that the project accounts are audited annually. The annual audit report (annual audited financial statements with audit opinion including Management Letter) will be submitted to the WB within six months from the end of the fiscal year. The audit firm recruitment will be made by the MInT as early as possible using the audit TOR agreed with the WB. The auditors will audit on all the three entities involved in the project. The audit will be carried out by the OFAG, or a qualified auditor nominated by the OFAG and acceptable to the WB. The audit will be carried out in accordance with the International Standards of Auditing (ISA) issued by the International Federation of Accountants (IFAC). In accordance with the WB's policies, the WB requires that the client disclose the audited financial statements in a manner acceptable to the WB; following the WB's formal receipt of the statements from the client, the WB makes them available to the public in accordance with the WB policy on access to information.

#### **FM-related costs**

33. The project work plans, and budget will include the costs of (a) audit, (b) FM-related trainings, and, (c) bank charges, and so on.

#### **FM Risk assessment, strength and weaknesses**

34. The FM risk of the project is Substantial. The preliminary mitigating measures proposed in the action plan will help reduce the risk of the project once implemented and applied during project implementation.

35. The project will inherit the various strengths of the country's PFM system. Several aspects of the PFM system are functioning well, such as the budget process, budget classification system, the roll out of IFMIS at the federal level, compliance with financial regulations, and satisfactory government's internal system. Several reforms are being undertaken to improve the country's PFM systems through the government's PFM strategy and the support of development partners (such as the PFM project funded by WB).

36. The main drawbacks are the absence of a specific internationally accepted accounting standard applied in the preparation of the public accounts (that is, IPSAS is not yet adopted), high staff turnover and a shortage of qualified accountants and auditors in the public bodies and weak internal audit function. In addition, two of the three assessed entities do not have recent experience in managing WB operations (the MInT did manage a WB project previously but the ECA has not managed any projects at all). As a newly established public body, the ECA has not yet recruited and assigned staff for budget, account (partial) procurement, property management, and internal audit sections. In addition, the external audit reports of the MInT and MoSHE revealed serious findings or internal controls weaknesses in budgeting and budget control, advances and payables, record keeping, and procurements. The grant awards under component 3 may lead to risk or challenge or delay in accounting and ensuring use for purposes intended.



**Financial Management Action Plan**

37. Factoring in the above strengths and weaknesses, the inherent and control risk of the project is rated as Substantial. The following actions are agreed to be performed to mitigate the identified risks in the project.

**Table 1: Agreed actions for mitigating fiduciary risks**

	<b>Action</b>	<b>Date Due By</b>	<b>Responsible</b>
1	Manuals and guidelines: a. prepare an FMM. b. prepare an MGM.	a. Within three months after project effectiveness. b. Disbursement condition.	MInT
2	Budgeting: a. The project AWPB for the following year is finalized and submitted to the WB for no objection not later than March 31 <sup>st</sup> of each year. b. Pragmatic/realistic projects budgets will be prepared that takes realities on the ground and capacities into consideration. c. Strong budget monitoring arrangements will be established to ensure that project resources are used for purposes intended. Budget will be controlled at transaction level, at system level and at reporting level. Dedicated budget checks will be regularly performed. d. Budget utilization will be closely monitored, and bottlenecks/challenges will be addressed quickly.	During project implementation.	MInT
3	Accounting: Develop a chart of account suitable for the project and customize the IFMS/IBEX to accommodate the project reporting requirement and if this is not possible under the IFMIS/IBEX, adopt other accounting software like Peachtree accounting software.	As part of the FMM.	MInT/ECA/MoSHE
4	Staffing: Recruit one FMS, recruit or assign one accountant for the MInT and recruit or assign one FMS each for the ECA and MoSHE.	For FMS for the MInT, by effectiveness  For the MInT, an accountant and an FMS for the ECA and EthERNet, all within three months after project effectiveness	MInT/ECA/MoSHE
5	IFR/Report issues: a. Trainings will be provided by the Bank.		a. WB



	<b>Action</b>	<b>Date Due By</b>	<b>Responsible</b>
	b. Quarterly submission of IFRs.	a. Disbursement Financial Information Letter [DFIL]). b. Within four months of effectiveness. c. Within 45 days of the end of quarter.	b. MInT
6	Project Audit issues: a. Recruitment of external auditors at early stages of the project. b. Project annual financial statements will be prepared on time and on timely closure of accounts will be made. c. Submission of annual audited financial statements and audit report including the Management Letter. d. Disclosure-In accordance with the WB policy, i. the WB requires that the client disclose the audited financial statements in a manner acceptable to the WB. ii. Following the WB’s formal receipt of these statements from the client, the WB makes them available to the public in accordance with the WB policy on access to information.	a. Within six months of effectiveness. b. Within three months of year end. c. Within six months of the end of each fiscal year. d. Annually.	MInT.
7	Entity audit issues: Address or resolve the external audit findings of the MInT and MoSHE; update the WB on the status of resolution along with quarterly IFRs.	Quarterly during implementation as part of quarterly IFRs.	MInT and MoSHE

**FM Covenant and Conditions**

38. **FM covenants.** The FM-related covenants will include the following:

- a. Maintaining satisfactory FM system throughout the life of the project.
- b. Submitting IFRs within 45 days of the quarter end.
- c. Submitting audited financial statements within six months of the year end.

39. **Effectiveness condition.** As per the financing agreement, the Recipient has established the PIU, in form and substance satisfactory to the Association, and the PIU is fully staffed with technical staff satisfactory to the Association, including the project coordinator, a procurement officer, an FM officer or an accountant, all recruited in accordance with the provisions of the procurement regulations.

40. **Disbursement condition.** There are two recommended disbursement conditions:

- a. *For the grants under window 1 and 2 of Component 3:* The MInT will develop and submit for the WB’s no objection an MGM that will provide detailed guidelines on how selection, management,



implementation and other procedural issues of grants made to beneficiaries/digital start-ups are managed or administered. Disbursement is not recommended until this manual is prepared and approved by the WB.

- b. *For the CERC (Component 5):* The MInT will develop and submit for the WB's No Objection an operating manual for the CERC that will provide detailed guidelines on management, implementation, and other procedural issues of emergency response. No disbursement under component 5 is recommended until this manual is prepared and approved by the WB.

### **FM Supervision Plan**

41. FM supervision missions will be an integral part of the project's implementation reviews to ensure the continuing adequacy of the FM arrangements and to ensure that expenditures incurred under project parts remain eligible for the WB's funding. As the FM risk for the project is rated as substantial, the project will be supervised twice per year. After each supervision risks will be recalibrated accordingly. Supervision activities will include:

- a) On-site visit to implementing entities, including the PIU (MoF). These visits will include a review of the controls and the overall operation of the FM system; review of internal audit, selected transaction reviews, and sample verification of the existence and ownership of assets.
- b) Reviews of IFRs and follow-up on actions needed.
- c) Review of audit reports and management letters and follow-up on action needed.

### **Conclusion**

42. The conclusion of the assessment is that the project's FM arrangements meet the WB's minimum requirements under WB policy and directive on IPF and FMM.

### **Procurement Arrangements**

43. **Compliance with WBG regulations and guidelines.** Procurement under the project will be carried out in accordance with the WB Procurement Regulations for IPF Borrowers (Borrowers Regulations), dated November 2020; the guidelines on Preventing and Combating Fraud and Corruption in projects financed by IBRD Loans and IDA credits and grants, revised July 1, 2016; and the provisions stipulated in the financing agreement.

44. **The WB's standard procurement documents.** The standard procurement documents for the WB shall be used for all contracts subject to international competitive procurement.

45. **Procurement plan.** The procurement plan, as agreed between the WB and the Borrower, will specify procurement methods and their applicable thresholds, as well as activities that will be subject to the WB's prior and post reviews. The implementing agency shall submit the procurement plan through the Systematic Tracking of Exchanges in Procurement (STEP), and it will be disclosed by the WB to the public via the WB website once the plan is approved by the WB. The procurement plan will be revised as needed throughout the project duration to



reflect the actual project implementation needs and improvements in institutional capacity. Through mandatory use of STEP by the Borrower, the WB will be able to monitor all procurement transactions.

**Main procurement activities.** The project will involve procurement of works, goods, and consultancy services. The project will finance the cost of activities including: (a) pre-purchase of internet for government institutions and for universities and TVETs in various regions, (b) development of a consolidated portal for government MDAs and the digitization of selected e- Services, (c) facilities for remote working and installation of communications rooms for various MDAs, (d) network equipment, (e) integration of national databases and development of cloud based national data center, (f) development of online transaction systems for various applications, (g) multiple consultancy service for TA and other studies, and (h) various Individual consultants, and so on.

46.

**Procurement strategy.** The MInT has started preparing of a draft PPSD prepared by MInT has been completed and approved by the Bank at the time of negotiations.

47. **Institutional arrangement for procurement.** The MInT will be responsible for procurement implementation. A PIU will be established under the MInT that will be populated with qualified staff to process implementation of project activities. The unit will have operational, coordination and technical management responsibility of the project. The procurement decision making process will utilize the internal institutional structure of the MInT including the PEC. As the project's implementing agency for procurement, the MInT will process procurement activities for the project beneficiary institutions, ECA (for subcomponent 1.2) and EthERNET (for subcomponent 2.3), and other institutions as necessary. The unit will closely coordinate with these beneficiary institutions for their respective technical input at each stage of the procurement process. The MInT will take over initiated activities from the COPCD that had been implementing activities under the PPA.

48. **Procurement risk assessment.** Risk assessment related to procurement implementation has been completed. The main risks identified include: (a) a lack of prior experience in implementing procurement under the WB-financed projects and overall procurement capacity limitations; (b) slow procurement processing and decision making with potential implementation delays; (c) challenges from PEC members who do not have procurement experience with the potential to block procurement processes and decisions; (d) limited technical capacity at the MInT to lead, manage, prepare and evaluate technical aspects of procurement activities; (e) limited technical capacity at beneficiary institutions to handle technical aspects of identified contracts; (f) delays in preparation of quality TORs and the technical parts of bid documents; (g) complexity of the expected internet pre-purchases from licensed operators, as this is the first of its kind in the country and is dependent on successful liberalization of the sector; and (f) poor contract management system with potential time and cost overrun and poor quality deliverable.

49. **To mitigate the identified risks,** the following are recommended action points: (a) hire two procurement experts with experience in WB-financed projects at the MInT; (b) develop, implement, and monitor an accountability framework with defined business standards for staff involved in procurement and contract management, including internal approvals (this accountability framework should be part of the procurement section in the PIM); (c) provide procurement trainings to new members of the PEC and to others that require such training; (d) hire technical experts with experience in the field of ICTs to support both the MInT and beneficiary



institutions; (e) ensure that the MInT and beneficiary institutions gain benchmarking lessons from similar arrangements in other countries; and (f) create an appropriate contract management plan, develop KPIs and hire adequate staff for administration and monitoring of contract implementation.

50. Based on the above procurement risks, the overall procurement risk rate of the project is **High**. Once the procurement mitigation actions have been successfully implemented, the residual risk will allow the project procurement risk to be revised to Substantial.

51. **National procurement arrangements.** When approaching domestic vendors, the country's own procurement procedures may be used. When the Borrower uses its own national open competitive procurement procedures as set forth in Public Procurement and Property Administration Proclamation No. 649/2009, such arrangements shall be subject to the provisions of paragraph 5.4 of the procurement regulations. The national standard bidding documents will be modified to reflect the requirements included in this provision.

52. **Implementation support and post-review.** The WB will prior review contracts based on risk and complexity of activity which will be indicated in the procurement plan in STEP. The prior review contracts will be updated in the procurement plan annually or as necessary during implementation, based on the procurement capacity assessment during implementation support missions.

53. The WB will carry out regular procurement supervision missions on an annual basis and carry out procurement post review and/or independent procurement reviews on an annual basis. Contracts not subject to prior review will be subject to post review by the WB as per procedures set forth in annex II – Procurement Oversight of the Borrowers Regulations. The sample contracts for the procurement post reviews and independent procurement reviews will be risk based. The WB will undertake the post reviews online, accessing procurement documents and data from STEP. The borrower shall upload all procurement process documentation and information in STEP at each roadmap stage. At completion of the contracts the borrower shall also upload completion documents including inspection, acceptance, delivery and final payment evidences in STEP.

54. Using STEP, comprehensive information of all contracts for goods, non-consultancy services, and consultants' services awarded under the sub-component, for all contracts subjected to the WB's prior review as well as post review, will be available automatically, including but not limited to: (a) brief description of the contract; (b) estimated cost; (c) procurement method; (d) timelines of the bidding process; (e) number of bidders that participated; (f) names and reasons of rejected bidders; (g) date of contract award; (h) name of awarded supplier, contractor or consultant; (i) final contract value; and (j) contractual implementation period, and so on.

55. **Selection methods.** The table below describes the various procurement methods and thresholds to be applied for procurement activities.

**Table 2. Thresholds for procurement approaches and methods and prior review thresholds**



Method	Market approach	Procurement method threshold (US\$)	Prior review threshold (US\$)
<b>Works (including turnkey, supply, and installation of plant and equipment)</b>			
Request for Bid (RFB)	Open National	< 7,000,000	≥ 5,000,000
	Open International	≥ 7,000,000	
Request for Proposal (RFP)	Open International	≥ 7,000,000	≥ 5,000,000
<b>Goods, information technology, and non-consulting services</b>			
Request for Bid (RFB)	Open National	< 1,000,000	≥ 1,500,000
	Open International	≥ 1,000,000	
Request for Proposal (RFP)	Open National	< 1,000,000	≥ 1,500,000
	Open International	≥ 1,000,000	
Request for Quotation (RFQ)	Limited National	< 100,000	NA
Arrangement through UN Agencies	As per Paragraphs 6.47 and 6.48 of <i>Procurement Regulations for IPF Borrowers</i> .		
<b>Consulting services</b>			
Quality and Cost Based Selection (QCBS)	National	< 200,000	≥ 500,000
	International	≥ 200,000	
Least-Cost Selection (LCS)	National	< 200,000	≥ 500,000
Consultants Qualification Selection (CQS)	National	≤ 100,000	≥ 500,000
	International	≤ 200,000	
Individual Consultant (IC)	Open / Limited / International / National	NA	≥200,000
	Direct	NA	≥100,000
Arrangement through UN agencies	As per paragraphs 7.27 and 7.28 of procurement regulations for IPF borrowers.		



## ANNEX 2: Detailed Project Description

COUNTRY: Ethiopia

Ethiopia Digital Foundations Project

- 1. The Ethiopia Digital Foundations Project is intended to develop Ethiopia’s digital economy.** It will enable its citizens, businesses, and the government to reap digital dividends in the form of faster growth, lower transaction costs, more jobs and greater efficiency. It will support the necessary steps to introduce market competition, private sector participation, foreign investment and independent sector regulation. The country must also expand and strengthen its basic digital infrastructure, especially the fiber network and mobile broadband, towards achieving the African Union goal of universal affordable and quality broadband access by 2030. Experience elsewhere, notably under other IDA-financed programs (for example, Regional Communication Infrastructure Program [RCIP] (P094103), West Africa Regional Communication Infrastructure Program [WARCIP] (P116273), Central African Backbone [CAB] (P108368)) indicates that this can best be achieved by employing an MFD approach. A particular area of focus will be enhancing broadband services to the government and better serving universities and government offices in provincial areas. The country needs to generate opportunities for new jobs through its investments and reforms in digital transformation, and this will help in creating an ecosystem in which new digital start-ups can thrive. There is also a need to ensure that offline citizens also benefit from the push towards the digital economy. Finally, a CERC has been added to the program design to allow for greater flexibility in responding to any emergency crises during the duration of the project.
- 2. With the onset of COVID-19 in Ethiopia, there is an increased urgency to develop Ethiopia’s digital foundations.** The proposed project will support this by increasing expansion and resilience in the internet networks through market liberalization (component 1); by making more bandwidth available to the government and students, helping promote online working and learning, and so on (component 2); and providing funding to digital start-ups and small suppliers that are most subject to the macroeconomic shocks and have little capacity to sustain cash flows (component 3). The CERC could potentially serve more immediate needs including support for teleworking by government officials, addressing internet requirements for hospitals, and so on (component 5).
- 3. A programmatic project structure is proposed for this program, in which it is possible to foresee a second phase, or additional financing, that could start around 2023,** once funding under IDA-20 becomes available. Originally, this project was planned for a project envelope of US\$300 million. However, faced with the urgent need to redirect IDA-19 resources to the COVID-19 response, the project envelope was reduced to US\$200 million. This has involved downsizing the scope of some activities and postponing others to the second phase, notably work on expanding the coverage of mobile broadband in rural areas and enhancing Ethiopia’s digital skills and literacy. Some preliminary discussions have been held with possible complementary source of financing, including the OPEC Fund, which may be able to close this gap.

### Component 1: Digital economy, enabling legal and regulatory environment (US\$20 million equivalent)

- 4. The aim of this component is to strengthen the analog foundations of the digital economy, in particular policy making, and effective regulation for the telecommunications sector and for the development of digital entrepreneurship.** A strong telecommunications sector is built on market competition, private sector participation and effective independent regulation—all of which have been lacking in Ethiopia to date. The GoE has requested



support from the IFC for the award of two new full-service telecommunication licenses to compete alongside the incumbent, Ethio Telecom. The ECA issued an initial call for expressions of interest for the new licenses on May 21, 2020, with a closing date of June 22, 2020 for responses.<sup>58</sup> About 12 expressions of interest were received.<sup>59</sup> The ECA has announced its intention to issue the RFP in October 2020 for completion by March 2021. The government has also announced that the partial privatization of Ethio Telecom will go ahead with the sale of up to 40 per cent to a strategic partner, with a further 5 percent of shares set aside for purchase by Ethiopian nationals.<sup>60</sup> To fund the TA and the transaction advisory for the competition transaction led by IFC, the GoE requested (on August 30, 2019) funding from the GIF. For the privatization transaction and regulatory support, the government signed on October 22, 2019 a PPA of US\$6 million under this project.

### Subcomponent 1.1: Partial privatization of Ethio Telecom

5. **This sub-component will finance TA and support for the partial privatization of Ethio Telecom.** Until the passage of the Communications Services Proclamation in September 2019, Ethio Telecom—which is 100 percent state owned—enjoyed virtually a complete monopoly in the provision of telecommunication infrastructure and services.<sup>61</sup> Ethio Telecom, fully owned by the GoE, remains profitable (2019/20 revenue of approximately US\$1.33 billion and Earnings before interest, taxes, depreciation, and amortization (EBITDA) of US\$770 million or a 58 percent margin<sup>62</sup>) and contributes considerable revenue and dividends to the Treasury (23.7 percent of revenue was paid in tax with a further 8.4 percent was distributed as dividend to the GoE in 2020). However, Ethio Telecom is estimated to retain debts of at least US\$1.3 billion, and possibly higher, and made loan repayment and interest payments of over US\$300 million in the FY, more than twice the level of foreign currency generated. With the opening of the telecom market, Ethio Telecom will come under pressure, both to hold on to its existing market share and to offer interconnection and infrastructure sharing services to the new market entrants. However, the government has made it clear that support for Ethio Telecom will be restricted to the hiring of a Transaction Advisor to manage the process. No further TA or IDA funds have been requested to support Ethio Telecom’s restructuring process, nor funds for the development of a social plan in the event that Ethio Telecom has to reduce its staffing levels.
6. **The process of recruiting a transaction advisor** (firm) to manage the privatization process, including completing the inventory of assets and valuation, began in 2019, initially using trust funds under the Ethiopia ICT Sector Reform Program (P168536). The transaction advisor was hired in September 2020 using funds from the PPA. The transaction advisor will assist in the preparing of a data room, organizing a roadshow for potential investors, conducting a bidding process, and advising the GoE on the form the transaction should take, and selecting of a strategic partner. The aim will be to complete the partial privatization process within 6-9 months, so that Ethio Telecom does not fall behind in the more general market liberalization; but this timetable may be affected by the COVID-19 pandemic.

<sup>58</sup> <https://eca.et/2020/05/21/request-for-submission-of-expressions-of-interest/>.

<sup>59</sup> <https://eca.et/2020/06/26/press-release-on-eois-received/>.

<sup>60</sup> <https://www.telecompaper.com/news/ethiopian-govt-offers-40-of-ethio-telecom-to-international-operators-5-to-public--1340061>.

<sup>61</sup> One exception is in the field of fiber optic networks where both the electricity and railway utilities own their own fiber networks, and do make capacity available to virtual ISPs, such as Websprinx, as well as Ethio Telecom itself. But real competition has been limited to date.

<sup>62</sup> <https://www.ethiotelcom.et/ethio-telecom-2012-efy-2019-20-annual-business-performance-summary-report/>. Although revenue growth in local currency was more than 30 percent during the year, in U.S. dollars it grew by only 2.3 percent.



## Sub-component 1.2: Strengthening independent ICT sector regulation

7. A critical part of the overall process of telecom reform is the need to strengthen the sector regulator, the ECA, so that it can function effectively as an independent, transparent, efficient and accountable regulatory body. Following its creation in September 2019, the staff of the ECA were drawn initially from the regulation and technical standards directorate of the former ministry. Some functions may also be absorbed from Ethio Telecom, which previously managed spectrum and internet domain names. Other staff will need to be recruited and there is a particular need for international regulatory expertise as Ethiopia opens its telecom market for the first time. The directorate for regulation and technical standards had few regulatory responsibilities in a monopoly market, beyond that of type approval for handsets. By contrast, the ECA is responsible for a broad range of activities, as set out in the Communications Services Proclamation 1948/2019. It is also expected to acquire additional responsibilities for eCommerce and the establishment of a future certification authority, under the eTransactions proclamation. The support to be provided to the ECA will be geared toward helping it carry out these tasks in the newly competitive market. For procurement processes, several of the tasks may be aggregated together and awarded to consulting firms, and they include:
- a) **Assisting the ECA in establishing itself physically**, by providing seed funding to rehabilitate the office space it is renting, by acquiring basic IT equipment and office furniture, and so on. Office rental is provided under the government budget. Some of this assistance for start-up costs is already being provided under the PPA.
  - b) **Assisting the ECA in establishing itself institutionally**, by hiring expert consultants on specific topics to help to define its organizational structure, develop a budget, draft a manual of procedures (including for conducting public consultations on draft decisions) and so on.
  - c) **Assisting the ECA in establishing itself professionally**, by hiring a specialist human resources firm to assist in drafting TOR and recruiting staff, setting a salary scale, developing a training/capacity building plan, drafting staff regulations (for instance, relating to possible conflicts of interest), and so on.
  - d) **Assisting the ECA in developing procedures to create a competitive market environment**, in close cooperation with the financial advisor (IFC) which has been asked to guide the process of selecting two new full-service telecom licenses, with the ECA taking the final decision. This process will include conducting stakeholder consultations, developing draft licenses, and allocating scarce resources to the new market entrants, including spectrum, physical rights of way, and numbering. The government has also indicated its intention to establish coverage obligations for Ethio Telecom and the two new service providers to move toward universal coverage. An initial public consultation process was launched on October 22, 2019 (see [www.eca.et](http://www.eca.et)) and ran until November 22, 2019, with an in-person meeting hosted on November 12, 2019. The Bank team also assisted in the analysis of responses. Although ECA did not publish the comments, nor any formal response, it has nevertheless published three sets of regulatory directives on its website for public comment between April and October 2020<sup>63</sup>.
  - e) **Assisting the ECA in issuing further class licenses and authorizations in specific market segments**, including broadcasting (for example, FM radio spectrum assignments), telecoms infrastructure (for example, cell

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<sup>63</sup> <https://eca.et/2020/06/10/stakeholder-consultation-on-directives/>. The first round of directives, published in April 2020, covered telecommunications licensing, dispute resolution, consumer rights, numbering and quality of service. The second round, published in August 2020, covered infrastructure sharing and collocation, interconnection, tariffs, competition, and SIM card registration. The third round, published in October 2020, covered mobile number portability, national roaming and the universal service framework.



towers, fiber backbone, data centers), ISPs, satellite service providers, and so on. Other countries in the region, such as South Africa, have made temporary allocations of additional high demand spectrum as a short-term response to the COVID-19 pandemic, and this will also be considered in Ethiopia.

- f) Assisting the ECA with in ensuring that Ethio Telecom implements a functional separation of its assets between infrastructure and services arms, so that the infrastructure arm can price and sell wholesale services (for example, voice and data connectivity) to all market players under non-discriminatory arrangements.
- g) **Assisting the ECA in its role of managing spectrum**, including acquiring relevant equipment for spectrum monitoring, allocating spectrum to specific services and assigning licenses, and participating in regional and international spectrum management bodies. The call for expression of interest for investors notes that spectrum will be allocated to the three operators in six bands, ranging from 800 MHz to 2600 MHz, but there is no detail yet on amounts. A consulting firm will be hired to help in conducting a baseline spectrum review using trust funds.<sup>64</sup> At a later stage, an expert consultant will assist the ECA in acquiring spectrum management equipment to monitor of the competitive market.
- h) **Assisting the ECA in its role of monitoring market development**, including helping to establish an ICT indicators unit, developing coverage and digital infrastructure maps, conducting market surveys, defining and measuring significant market power, developing a website for sector data, measuring and monitoring quality of service, and defining guidelines for data protection and privacy.
- i) **Developing a USF** and building the capacity to run it, including developing an operational manual and governance structure, funding mechanism, and market gap assessment and conducting pilot auctions for selecting telecom operators in rural areas. The ECA should also carry out a survey of the level of coverage in rural areas to identify ‘white spots’ which lack mobile broadband coverage (for example, 3G and higher). The project will also support the ECA in developing specifications for a mechanism to disburse USF funds to subsidize the construction of cell towers in these regions, for instance using “pay or play” or a reverse auction mechanism whereby operators bid for the lowest level of subsidy required for them to provide service in these unserved zones. It is planned that, if a second phase of project lending goes ahead, or if alternative sources of donor funding are identified, then priority will be given to extending rural broadband and IDA funds will supplement those available in the USF.
- j) Assisting the GoE in developing and managing a communications plan, for the wider telecom reform process and especially for the privatization, targeted in particular at Ethio Telecom management and staff and other stakeholders to ensure broad public support for the strategy being followed. This will complement the communications plan being developed by the IFC team for the market liberalization process.
- k) **Transferring responsibility for the .et domain name management**, currently with Ethio Telecom, to the ECA and setting up an internet registry and authorizing private internet registrars to issue domain names using the .et ccTLD. This may also involve setting up a local multi-stakeholder internet governance forum (for which Ethiopia is receiving support from the African Union under the PRIDA<sup>65</sup> program). The MInT has also requested support in managing the .gov.et sub-domain for government users. At a later stage, once competition and interconnection are established, it is expected that the project will provide TA for establishing an Internet Exchange Point (IXP).

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<sup>64</sup> The WB team has received funding from the PPIAF and the EMDTF on Growth and Competitiveness to support this study.

<sup>65</sup> Policy Regulation Initiative for Digital Africa (PRIDA).



- l) **Building general capacity and strengthening regulations**, including study visits and a tailored training program for ECA staff and management.
- m) **Conducting a study of gender and ICT**, together with the Women Affairs Directorate, to: (i) understand the different constraints that men and women face in the telecom sector, and to (ii) propose actions that need to be put in place to improve the participation of and benefits for women in the sector.
- n) **Creating a dispute resolution mechanism** and a capacity for arbitration arising from the telecom market.
- o) **Creating regulatory standards on siting, design, construction, and operation of telecommunications infrastructure in response to climate risks**. These standards will then be imposed on carriers to comply with technical requirements that seek to build resilience into new and existing infrastructure. The ECA may also impose conditions to comply with a designated government disaster plan as part of the operator license.

### Sub-component 1.3: Supporting the development of the digital economy

8. Although the main focus of this component is on the partial privatization of Ethio Telecom and strengthening the regulatory authority, there are a number of other tasks associated with creating a vibrant, inclusive and safe digital economy in Ethiopia, and where the project can provide support or act as a complement. The MInT has prepared a Digital Transformation Strategy,<sup>66</sup> approved by the Council of Ministers in 2020, which sets out a vision for the development of the digital economy. The project will support the implementation of the strategy in a number of ways including:
- a) **Digital Economy Policy**. This will support capacity building of senior Government officials, notably in the MInT (also under sub-component 3.3) and ECA (also under sub-component 1.2), to design, implement and evaluate policies and regulations for the development of the digital economy; and developing strategies to improve device affordability, as a prerequisite to reach the rural population. This may include data collection and conducting a study on gender disparity in the sector. The study will assess the different constraints that men and women face in the telecom sector and propose actions that need to be put in place to improve the participation of and benefits for women in the sector. A new eTransactions Proclamation, adopted by the Council of Ministers in June 2020, allocates responsibilities in these areas to the ECA, MInT, and other agencies.
  - b) **Digital Business and Entrepreneurship**. The GoE has committed to creating around 300,000 new jobs in the digital sector, and component 3 will be specifically geared toward helping in achieving this goal. But there are also policy and regulatory actions that will need to be implemented to facilitate this process. The job creation commissioner has requested that the project finance a systematic study of existing legislation in different sectors of the economy that might be hindering digital job creation. For instance, currently the law obliges vendors to offer a storefront and toilet facilities even if they sell exclusively online. If not amended, this could deter market entry in online commerce.
  - c) **Digital Identification(ID)**. A GoE initiative to introduce a foundational ID system has been led by the MoP in collaboration with the MInT and the Prime Minister's Office. The project will support the operationalization of the enabling environment and key building blocks in line with the principles on identification for sustainable

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<sup>66</sup> GoE, MInT. 2020. Digital Ethiopia 2025: A digital strategy for Ethiopia Inclusive Prosperity. The strategy identifies four main pathways for development: 1) Unleashing value from agriculture; Future global value chains in manufacturing; 3) Building IT-enabled services; and 4) Digital as a driver of tourism competitiveness.



development and international best practices for inclusion, data protection and privacy, linkages with civil registration, and technology and vendor neutrality. Specific activities include:

- **Establishment of the legal framework** for data protection and the foundational identity document (ID) system and support to the implementation of key institutions. This component includes legal consultancy services to the GoE to ensure that the draft amendments to the Proclamation 760/2012 on the National Identity Card (NID) are in line with the principles and governance structure of the National Identity Program of Ethiopia, notably in terms of protection of personal data, inclusion, and non-discrimination. This project will also finance capacity building to support the implementation of the Proclamation 760/2012 and Data Privacy and Protection Proclamation, including the operationalization of two key institutions: the Data Protection Authority and the Digital ID Agency.
  - **Expert technical advisory support and implementation of a pilot:**
    - i. Capacity building and advice on best practices for the design, implementation and project management of digital ID systems;
    - ii. Software, hardware, support, and M&E for a limited-scale registration and authentication pilot; and
    - iii. Informed by the pilot results, a national strategy, a comprehensive technical design, and procurement documentation for a national-scale system.
  - **Civil society and public engagement**, including dedicated resources for the GoE to organize civil society consultations and establish other mechanisms that will provide a feedback loop, in order to inform the design and implementation of the foundational ID system.
- d) **Data Privacy and Protection.** The draft Data Privacy Protection Proclamation calls for the establishment of a new Data Protection Commission. The project will support the operationalization of the law and the establishment of the new commission by funding activities such as registering of data controllers and processors; establishing a mechanism by which to receive and decide on complaints; and building the commission's capacity to issue regulations, decisions, and advice.

## **Component 2: Digital government and connectivity (US\$133 million equivalent)**

9. **The objective of this component is to develop the capacity of the government to deliver digital services**, including building the digital skills of government officials, and to crowd-in private sector investments to improve regional and domestic connectivity infrastructure, to connect public institutions and higher education institutions to broadband internet. It will build upon the market opening measures supported in component 1 to stimulate private sector-led investment to expand the geographic coverage of broadband networks, to better serve government institutions, businesses, and citizens across the country. This component will support the following activities:

### **Sub-component 2.1: Digital government and COVID-19 response**

10. **This sub-component will help build the government's capacity to deliver digital services, and to respond to the COVID-19 pandemic**, including by developing a government ePortal, for secure access by citizens and firms, by establishing communications rooms in key ministries to facilitate remote working, by designing an enterprise architecture for digital government, and by building the digital skills of government officials. The COVID-19



pandemic has heightened the awareness of the value and necessity of delivering government services online and eliminating the need for queuing or face-to-face contact when making and receiving payments or providing information. Ethiopia lags behind other countries in the region in its level of digitization of government functions, ranking in the bottom of the Middle EGDI (eGovernment Development Index) category of the UN's eGovernment rankings in 2020.<sup>67</sup> Ethiopia's EGDI score of 0.274 compares unfavorably with East African economies such as Kenya (0.5326), Rwanda (0.4789), and Tanzania (0.4206). Activities to be conducted under this sub-component will focus on 'quick wins' in the field of eGovernment, a digital response to COVID-19 and training of senior government officials in digital literacy:

- a) **Among the 'quick wins' for digital government are the development of a consolidated portal for government MDAs and the digitization of selected eServices.** Although, the MoF maintains an up-to-date website ([www.mofed.gov.et](http://www.mofed.gov.et)), this is the exception among government MDAs, and there is no single point of entry for citizens or SMEs. One of the 22 priority projects set out in the Digital Ethiopia 2025 strategy document is to "Employ a human centered approach to designing portals, helping maximize uptake and utilization," with the MINt taking the lead. Other priority projects include piloting an electronic portal that will allow online transactions and developing eCommerce marketplaces. The project will support MINt in achieving these short-term priority projects, with the aim of linking existing government applications (such as eVisa) to a central government website and digitizing at least four additional digital services and applications. The resilience of the consolidated portal and eServices to cybercrime, hacks, and breaches as well as the protection of personal data in the developed applications will be a priority objective in the implementation.
- b) **The COVID-19 pandemic has had a profound impact on working practices within the GoE,** emptying offices and forcing reliance on online working. This component will seek to improve available bandwidth for government MDAs (sub-component 2.2) and higher education (sub-component 2.2) and this sub-component will seek to address government requirements arising from the pandemic, such as improved facilities for remote working, with secure connectivity to data and systems, and the installation of communications rooms in key ministries. Provision of specialized remote working equipment and software will be used well beyond the current pandemic to enable more flexible working practices, particularly for interaction with foreign development partners and suppliers. The secure connection of remote workers to government networks and systems from off-premises locations or their personal devices at home will also be addressed.
- c) **Laying the foundations for a broader application of digital government in Ethiopia by designing a comprehensive enterprise architecture for the use of IT in government.** Establishing a common technical architecture across government, including a cybersecurity technical architecture, will allow individual line ministries and arms of regional regional/local government a freer hand to make their own investments while at the same time benefitting from shared core services. As an example, procurement of computers and laptops might be centralized to achieve economies of scale and to manage cybersecurity risks, but printing services may be decentralized. For instance, if additional funds are available, the project could support the creation of an integrated digital government enterprise architecture, interoperability platform and hybrid cloud (on the basis of private cloud service providers). Having a common enterprise architecture should also help avoid duplication of functions in government IT.

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<sup>67</sup> UN DESA. 2020. *eGovernment Survey 2020*. <https://publicadministration.un.org/egovkb/en-us/Reports/UN-E-Government-Survey-2020>.



- d) **The project will strengthen cybersecurity technical and operational capacity for threat intelligence, prevention, incident response, and recovery as well as upgrading cybersecurity skills in government**, in particular by providing TA and training to the government on anticipating and responding to cybersecurity attacks and breaches and on strengthening the capabilities, platforms and applications of the government CERT. The TA will build on the recommendations of a cybersecurity maturity model assessment for Ethiopia.
- e) **This activity aims to support the government in developing and implementing a digital capacity building program** for government officials. Although Ethiopia has satellite-based connectivity in all its *woredas*, nevertheless the e-Government system does not function effectively due to poor design, lack of complementary infrastructure, high usage costs and lack of capacity. Capacity building to train government officials to use digital services effectively and securely for coordination and service delivery can be a game changer for digital transformation of government. This will involve also supporting capacity building of government officials to design and implement climate mitigation and adaptation measures for broadband infrastructure and e-Government infrastructure. This might include, for instance, setting energy consumptions standards for devices or providing guidelines for the safe recycling and disposal of eWaste. This activity will be implemented by the MInT, which will work with the project team on selecting the targeted institutions.

#### **Sub-component 2.2: Connecting targeted public institutions to broadband**

- 11. **This sub-component will provide support for the government in enhancing its level of secure digital connectivity to government offices and public institutions across the country.** The proposed mechanism to do this will entail an upfront commitment for the pre-purchase of internet bandwidth from private sector operators under IRU contracts, over a period of 5-10 years. The locations of targeted public institutions to be served would include MDAs, schools, youth community associations, and especially in the first phase selected hospitals and health centers as, part of the COVID-19 response. The government has also requested support in the form of bandwidth to be provided to the ICT Park. The user requirements for internet bandwidth will be determined based on a feasibility study, which has been undertaken by the MInT, and in consultation with relevant sector ministries. Considerations around cybersecurity and data protection will be prioritized in the implementation.
- 12. **This activity will seek to incentivize private sector investment in internet connectivity (roll out of fiber optic networks and 4G/5G mobile networks), using provision of services to public institutions as an anchor tenant for wider geographical service provision.** For that reason, the award of bandwidth contracts will be based on a competitive bidding process and tendering would only begin after the new licenses are awarded, and services launched, sometime in 2021/22. The three full-service telecom operators, as well as fiber wholesalers, ISPs, and other licensed operators will be able to bid to offer this capacity, using the tendered contracts as an investment guarantee for a wider network rollout, benefitting all customers. Demand stimulation and aggregation will also enable providers to launch new services, with a reduced cost structure, which should in turn enable retail price reductions that benefit all Ethiopians, especially the poor.
- 13. Although the funding will be used for the purchase of capacity, not for infrastructure (that is, OPEX not capital expenditures [CAPEX]), nevertheless it should provide an investment for network roll-out in areas not currently well served. A potential bidder will need to comply with regulatory standards set by the ECA (sub-component 1.2) for climate-resilient and energy-efficient infrastructure as they build new infrastructure in areas to be served under this project. Building on the foundations of market liberalization in component 1, this activity will promote



cross-sector infrastructure sharing (for example, roads, railways, electricity transmission lines, and gas pipelines), where possible, to address gaps in the national backbone of optical fiber links, fiber connections to cell towers and increased redundancy and resilience in existing fiber links. Feasibility studies (based on the MInT study) and preparation of bidding documents will proceed in year 1 of implementation with contracting starting from year 2 onwards, in phases.

- 14. The use of long-term pre-purchase agreements will ensure that the benefits from the program are sustainable and will continue long after completion of this phase of the project.** The MInT will manage the program and will be encouraged to progressively implement cost recovery among MDA clients to ensure sustainability. In the first phase, priority will be given to connectivity to hospitals and health centers across the country as they seek to respond to the COVID-19 pandemic.

### **Sub-component 2.3: Connecting selected educational institutions to broadband**

- 15. As an extension of the drive to all government MDAs, this activity will focus on connecting selected higher education institutions, including universities, CTE, research institutions and TVETs to high-speed internet services.** Improving connectivity for higher education institutions is critical to empower the next generation of digital leaders for the private sector and government. Ethiopian universities currently lack sufficient connectivity to enable adequate access to the best global information and research collaboration. Where connectivity is available, it is often low quality, is at low speeds, is unreliable, and covers only a limited number of buildings on university campuses. Providing high-quality internet access, and affordable devices, for the estimated 22 million Ethiopians in the 15-24 age group will support the provision of high-quality education and will enhance opportunities for training and employment. It will also provide continuity of learning in the aftermath of the COVID-19 pandemic. Improved connectivity for young entrepreneurs will also provide a platform for the objectives of component 3 on digital entrepreneurship. The targeted institutions will also be coordinated with the overall portfolio of WB projects in the education sector in Ethiopia and the region.<sup>68</sup>
- 16. This activity will be implemented through EthERNET, Ethiopia's NREN, part of the MoSHE.** The organization currently connects about 36 universities but has plans to connect at least 100 more universities in Ethiopia. Further, of the roughly 1,500 TVETs in Ethiopia, only 25 are currently connected. As a member of the UbuntuNet Alliance, EthERNET can access low-cost international connectivity, academic content, and training opportunities as part of AfricaConnect3 initiative, which is supported by the EU. This will allow EthERNET and the universities in the consortium to access low-cost connectivity, OER online content, as well as training.

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<sup>68</sup> Currently, there are two regional centers of excellence projects in TVET and higher education, namely the East Africa Skills for Transformation and Regional Integration (EASTRIP: P163399) and Southern and Eastern African center of Excellence Project (ACE II-P151847):

- 1) Under EASTRIP, the WB is supporting the establishment of seven regional flagship TVET institutes (RFTIs) in government priority areas of Agro-processing, transport, manufacturing and energy. The seven institutes were competitively selected after government submitted a long list of TVET institutions.
- 2) ACE-II supports four African regional centers of excellence (ACEs), of which three are based at Addis Ababa University (in water management, drug and therapeutics and a railway center of excellence) and one at Haromaya University (in climate smart agriculture).

The RFTIs and ACEs could be good entry points for selecting targeted institutions under sub-component 2.3 and ensure complementarities between this project and the existing portfolio.



**17. More specifically, this activity will finance:**

- a) Prepayment of EthERNET's membership fees for the EU Africa Connect3 Program. This will enable Ethiopia's university students and faculty to participate in this important regional program which is funded by the European Union Commission, with service delivery and administration in the east and southern Africa regional handled by UbuntuNet;
- b) Enhanced international and domestic connectivity to higher education institutions across Ethiopia, using a similar model of demand aggregation and pre-purchase of capacity as used for government institutions in sub-component 2.1a;
- c) Campus-wide Wi-Fi networks to reach university departments, libraries, dormitories, and so on; this will be particularly useful as universities continue to practice social distancing and to promote remote learning, as a result of the COVID-19 pandemic;
- d) Support for EthERNET to employ dedicated technical staff and capacity building;
- e) Network equipment to support PoPs, and data caches, around Ethiopia; a distributed network will save on the requirement for long distance and international data transmission, and will reduce latency; and
- f) Access to OER, both domestically and abroad, and other NREN services, such as cloud hosting for learning management systems, digital libraries, storage and backup, Enterprise Resource Planning (ERP) systems, and identity and access management services (such as Eduroam, which is important for visiting scholars).

**18.** In the same manner as connecting public institutions, the project will ensure that all infrastructure built or operated under this subcomponent will comply with technical standards designed to ensure climate resilience.

**19.** The higher education sector, including TVETs, has been targeted for this intervention initially, rather than the education sector more generally, because of the linkage with the digital entrepreneurship program (component 3). But if successful, and depending on funding availability, support could trickle down later to secondary and primary schools in a possible second phase of lending activity, or if complementary sources of funding are identified. The education sector roadmap and 10-year plan envision secondary schools to be training centers for some skills (Level 1 and 2 trainings given at TVET currently). Hence, they could be considered under this component as secondary graduates are expected to pursue the job market or entrepreneurship. This activity will be implemented by EthERNET within the MoSHE.

**Component 3: Digital business and entrepreneurship (US\$40 million equivalent)**

**20. This component aims to nurture digital entrepreneurship and incentivize digital businesses to train and employ Ethiopians to participate in the digital economy, and thereby to generate income and jobs.** Following the recommendations of the Digital Entrepreneurship and Innovation diagnostic study in Ethiopia<sup>69</sup> as well as stakeholder feedback, the proposed interventions are focused on addressing the access to finance and digital economy skills constraints. Specially this component is expected to provide basic digital economy training for the informal sector (for example, individual contractors or suppliers), but with an industry focus for practical applications. This component has two main interventions that will finance: (a) two grant funding windows for digital start-ups and digital businesses; and (b) TA to MInT.

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<sup>69</sup>Commissioned by the World Bank and delivered by Deloitte in March 2020.



- 21. Ethiopia currently lags the continent’s digital standouts—such as Nigeria, Kenya, and South Africa—that have become known for digital entrepreneurship in Africa.** Ethiopia is a latecomer in e-Commerce: it ranks 141st out of 151 countries in the Business to Commerce (B2C) e-Commerce Index<sup>70</sup> (UNTACD, 2018). Officially, it allowed eCommerce to operate in the country only since September 2019.<sup>71</sup> Because of the lack of enabling regulations for digital economy and weak analog complements, for example, weak investment climate and low human capital,<sup>72</sup> the number of digital platforms and digital technology start-ups in Ethiopia is relatively small. Many local industry observers estimate the number of digital start-ups that have successfully launched and are operating to be fewer than ten in the past five years. A recent WBG commissioned study<sup>73</sup> identifies at least 32 existing digital platforms, of which a high number are seen in the services sector, in particular eCommerce, digital financial services, and transport services. Most platforms are operating only in Addis Ababa, and of these the eCommerce platforms are generally marketplace-focused and rely on payments being made in cash and conducted outside the platforms.
- 22. Tech hubs and incubation centers in Ethiopia can help in overcoming barriers to digital entrepreneurship, but their operations are largely unsustainable, being heavily dependent on donor funding-and very few digital start-ups that have graduated from those centers are operating successfully.** Since the concept of incubators/accelerators was introduced in Ethiopia, around 2014, around 9 incubation centers have been established in Addis Ababa (3 public, 6 private), and the MInT is planning to build a further 15 in secondary cities nationwide in the next 18 months. Both publicly and privately funded incubation centers solicit applications nationwide and provide co-working space and internet access to entrepreneurs. Privately-run incubation centers tend to have a more structured entrepreneurship support program, ranging from business skills training, to participating in regional innovation competitions, and linking entrepreneurs with financing opportunities. The business model of private incubation centers is largely in line with regional norms: innovation hub owners take a minority equity stake (up to 49 percent) in the start-up in exchange for incubation/acceleration services, sometimes rental incomes from commercial anchor tenants (for example, cafes) or office space are used to subsidize the hubs’ operational costs. Publicly run incubation centers generally face the problem of under-utilization and a lack of quality support programs. Privately run incubation centers on the other hand are facing capacity issues and an inability to scale. For example, the two most famous and biggest privately owned incubation centers in Addis—ICE Addis and blueMoon—take in just two rounds of applications from entrepreneurs each year, and each round can only accept 10-20 new applicants among hundreds of proposals. Because of this, the number of digital start-ups graduating from incubation is extremely limited. Donors and private sector foundations (for example, Mastercard Foundation, Khalifa Foundation) also recognize this problem and have started partnering with the MInT to provide structured entrepreneurship support programs, especially in the new incubation centers that the MInT is opening in secondary cities.
- 23. Angel investor networks have started emerging from diaspora, betting on Ethiopia’s digital transformation and a large potential digital market.** There is a very small number of active business angel networks (for example, ETBAN operated by IBA Ethiopia Center of Innovation; the Addis Angel Investors Network; and blueMoon Angels), but no Government incentive schemes to support and motivate individuals to become angel investors in Ethiopia. These networks are very new but with a strong appetite to invest in the Ethiopian start-ups. For instance, the

<sup>70</sup> [https://unctad.org/en/PublicationsLibrary/tn\\_unctad\\_ict4d12\\_en.pdf](https://unctad.org/en/PublicationsLibrary/tn_unctad_ict4d12_en.pdf)

<sup>71</sup> <https://www.press.et/english/?p=10838#>

<sup>72</sup> Ethiopia SCD 2016.

<sup>73</sup> World Bank. 2020. “Diagnostic on Digital Entrepreneurship and innovation in Ethiopia.” Research conducted by Deloitte.



ETBAN was founded in early 2019 to support the development of early-stage investor networks across Ethiopia and to grow the cohort of early-stage investors excited about the opportunities in Ethiopia. Personal remittances received in Ethiopia were worth just over US\$530 million in 2019<sup>74</sup>, but the World Bank projects that remittances will fall by around 20 percent, Africa-wide, in 2020, as a result of the COVID-19 pandemic<sup>75</sup>.

- 24. Links with other WB ongoing projects.** The preparation of component 3 is informed by the Ethiopia Competitiveness and Jobs Creation project (P143302) to enhance the market access of digital businesses to enable them to create business partnerships with foreign direct investment (FDI) firms operating in IPs. Digital Financial Services, including digital payments, are critical foundations for viable digital business models. To this end, this component will also collaborate with the Financial Sector Strengthening and Access Project (P171627), currently under preparation, and the Harnessing Innovation for Financial Inclusion study (P155381).

### Sub-component 3.1 Grants to digital start-ups and digital businesses

- 25. This sub-component is targeting Ethiopian start-ups going through the ‘Valley of Death’ and to incentivize digital businesses to provide trainings and device to businesses in the analog economy.** Given the nascent stage of Ethiopia’s digital ecosystem, as demonstrated by limited sector performance in terms of the number of successful digital start-ups, and severely limited access to finance, this Sub-component introduces two financing windows for digital start-ups and digital businesses:

- a. Window 1 is a co-investment grant aimed at helping digital start-ups gain access to risk capital, knowledge, and networks to start operating as a viable business, following an MFD approach. This funding window will be targeting digital entrepreneurs via a matching grant mechanism to match private sector investments in the digital start-ups selected by angel or other private early-stage investors, to maximize return on public funding and filter out non-viable business ideas.
- b. Window 2 is aimed at incentivizing established digital businesses to provide training, digital devices, and other support to Ethiopians to participate in the digital economy by becoming suppliers of goods/services for productive purposes (for example, enabling farmers to sell products via eCommerce and earn higher income). This will be achieved through providing digital adoption and inclusion grants to help offset some of the costs incurred by the digital businesses as they reach out, train, and/or provide digital devices to individuals. Access to funding will be conditional upon having female, rural, and disability beneficiary targets while not distorting the viability of the digital businesses.

- 26. A matching grants instrument has been chosen as the most appropriate support mechanism to digital start-ups and businesses given the current Ethiopian context.** The matching grants program will be guided by principles of equal opportunity and will use quotas to ensure that women are well represented. It should be mentioned that other financing instruments, such as lines of credit, (partial-) credit guarantees, and (quasi-) equity investments were also explored by this project. However, since Ethiopia’s capital market and the banking sector are not conducive to facilitate such transactions, a matching grant mechanism has been chosen as a first step towards building a more sustainable venture financing market by maximizing private investors’ and digital businesses’

<sup>74</sup> <https://data.worldbank.org/indicator/BX.TRF.PWKR.CD.DT?locations=ET>.

<sup>75</sup> <https://www.worldbank.org/en/news/press-release/2020/04/22/world-bank-predicts-sharpest-decline-of-remittances-in-recent-history#:~:text=In%202019%2C%20remittance%20flows%20to,5.6%20percent%20to%20%24470%20billion.>



participation. As part of the TA program for the MInT, under sub-component 3.2, creating a more sustainable early-stage financing mechanism, such as potentially setting up a 'fund of funds' or 'capital guarantee fund' can be supported by this project.<sup>76</sup>

27. **During project preparation, the COVID-19 pandemic hit the global economy and MSMEs are one of the most vulnerable segments.** This grant mechanism also allows for quick disbursements of funds to digital start-ups and providing support to small suppliers that are most subject to the macroeconomic shocks and have little capacity to sustain cash flows.

***Window 1: Co-investment Grants to Digital Start-ups (US\$10 million)***

28. **The objective of this window is to help digital start-ups gain access to risk capital, knowledge, and network to start operating as a viable business with an MFD approach.** The process will start, each year, with a shortlisting by public and private incubators of promising start-ups to pitch in front of a group of private sector investors (for example, the ETBAN operated by the IBA Ethiopia Center of Innovation, or the diaspora-led Addis Angel Investors Network). Private investors will then select promising and credible start-ups in which to invest. At this stage, the project will finance a 1:1 co-investment matching grant up to a maximum of US\$100,000 for each of the selected firms. The MGM will set out the criteria and verification method of eligible private investors and digital start-ups to minimize the risks of misusing public grants. One of the conditions for grant access will be for the start-up owners to receive digital entrepreneurship training, either via the mentorship provided by the private investors or via the incubation/acceleration centers, that will help them submit their pitching proposals. While 30 percent of the funds will be specifically reserved for firms owned by female entrepreneurs,<sup>77</sup> the grant priority will be also be given to firms that focus on building resilience to climate change impacts or reducing GHG emissions.
29. The steering committee to be set up for the project will include key relevant government agencies, academia, as well as private sector organizations and other stakeholders who have knowledge of the latest technology trends and applications. To increase the outreach campaigns in secondary cities and town and to enable digital entrepreneurs to travel to Addis Ababa to attend pitching competitions, demonstrations day or roadshows, if required, the project can provide a 'mini-grant' under this window to reimburse the campaign and travel costs. Since pitching competitions cannot be held continuously, to maximize the utilization of this funding window, start-ups that have successfully secured private financing not via these open challenges but by their own networks are also eligible to apply for this matching fund window, subject to the same verification process and criteria.

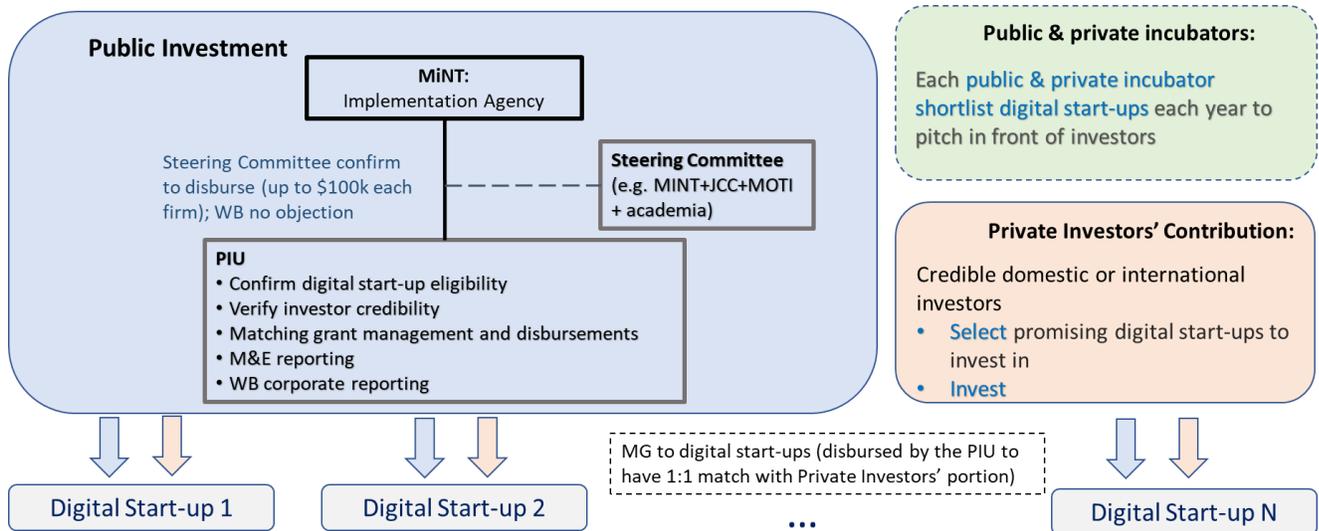
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<sup>76</sup> The GoE, especially the JCC in partnership with key ministries, such as the MoF, MInT, and MOTI, is in the process of evaluating various financing arrangements to support building a vibrant innovative ecosystem.

<sup>77</sup> Currently, around 7-10 percent of digital start-ups are owned by female entrepreneurs.



Figure 1. Implementation arrangements for Window 1 Co-investment Grants to Digital Start-ups



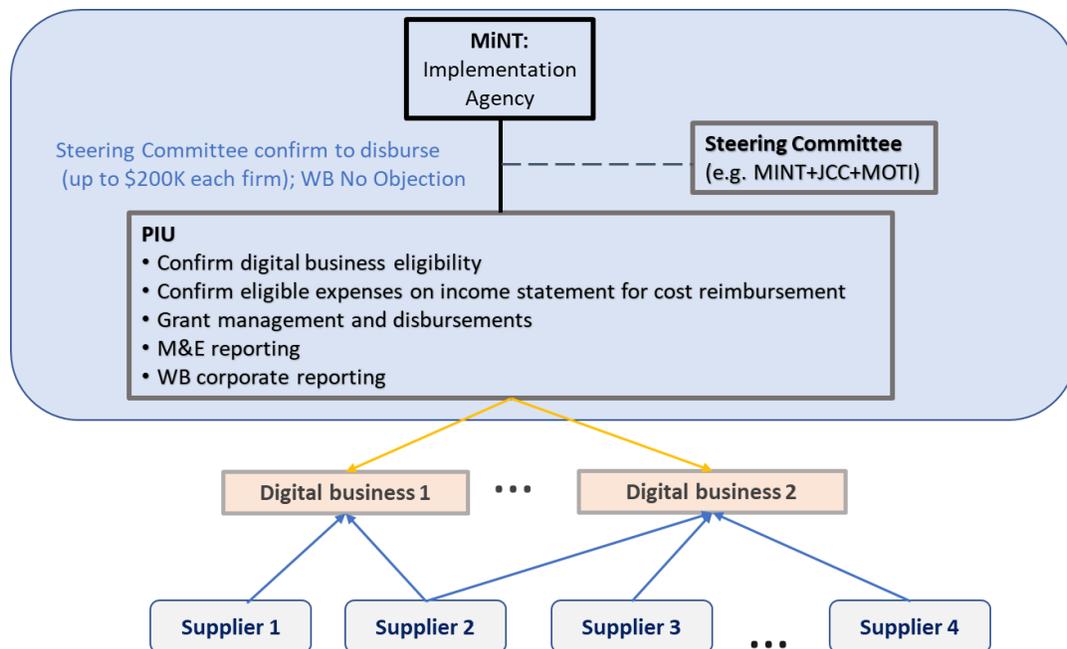
**Window 2: Digital Adoption and Inclusion Grants to Digital Businesses (US\$25 million)**

30. **The objective of this window is to incentivize digital businesses to provide digital economy training and digital devices to suppliers to participate in the digital economy** (for example, enable farmers to sell products on eCommerce platforms). The grants of up to US\$200,000 will be provided to selected digital business to partially cover the costs (up to 50 percent) associated with providing training, digital devices and outreach programs to suppliers and contractors (individuals who would be interested to sell their goods or services through the digital platforms). The individuals should use the product or service provided by the digital business to engage in productive economic opportunities, such as becoming a seller on eCommerce, a host on an accommodation sharing platform, or a driver on ride sharing or delivering services. Rural suppliers could also benefit from receiving training and digital devices to monitor and improve yields to increase income. The type of training and/or digital device they receive should be up to the digital business to decide to maximize the sustainability and cost effectiveness of such a grant program versus an approach that the government decides on behalf of the private sector since each sector's needs are vastly different. Areas of training are likely to include digital finance, business and communication skills, SME digital platform adoption and device usage training (for example, taking professional product photos and writing clear product specifications, conform to quality standards to participate in eCommerce). The selection of grant awards will provide a chance for women in the analog economy to receive training and digital devices to generate income in the digital economy.
31. **The PIM will set out the criteria and verification method by which eligible digital businesses, and eligible expense items in the income statement, can qualify for the cost reimbursements.** The guiding principles for cost reimbursement include the following: (a) the income statement of an eligible digital business will need to demonstrate successful disbursements of commissions and or revenue shares to suppliers; and (b) the income statement of an eligible digital business has to show the number of new suppliers recruited each year, with a cost breakdown covering the costs of training and digital device provided to new suppliers (with female, disability and rural supplier breakdowns). To minimize the risks of over-recruiting suppliers for the sake of accessing grant



funding that is not sustainable in the long term, the digital businesses will be required to provide proof that the benefitting individuals who receive training and/or digital devices have successfully earned an income that is higher than the costs of training and digital devices combined (that is, added value), hence limiting market distortions in this process. A special focus will be placed on reaching women and disabled persons as well as farmers in rural areas who are currently lacking means and information to take advantage of the digital economy, and the reimbursement of costs covering these supplier groups can increase to 80 percent (versus 50 percent reimbursement for general suppliers). It is suggested that the total grant funding envelope targeting the disadvantaged group whether rural or female or persons with disabilities, should be at least 50 per cent of grant window 2. Support for the provision of digital devices will also bolster the implementation of component 2, especially sub-component 2.3.

**Figure 2. Implementation arrangements for digital adoption and inclusion grants to digital businesses**



**32. To maximize the utilization of the two grant funding windows, the allocation amount between the two windows can be flexible.** The indicative split currently is US\$10 million versus US\$25 million for window 1 and 2, respectively, but this split can be changed as long as the total funding allocation is not exceeding \$35 million.

**Sub-component 3.2: Technical Assistance to the MiNT (US\$5 million)**

**33. As digital businesses start operating and growing, this sub-component will also provide capacity building to the MiNT for harmonizing Ethiopia with the regional digital single market initiative proposed under the *Horn of Africa Initiative*.** The harmonization will include conforming to regional standards for e-transactions, e-customs, e-signatures, cross-border data management, and cybersecurity. The Proclamation of Ethiopia Electronic Transactions 2018 now is largely in line with the UN’s UNCITRAL Model Law on e-Commerce (1996) but does not include features of the more updated UN Electronic Communications Convention and e-Commerce Law 2.0. It is



expected that with the digital single market harmonization, digital firms will be able to participate in global value chains. Furthermore, both domestic and foreign firms will operate and compete under the same conditions in Ethiopia, which in turn increases market efficiency and maximizes welfare gains for suppliers and consumers.

**34. Capacity building to set up a government co-invested venture capital fund can also be supported.** With the arrival of various early-stage financing vehicles aimed at supporting digital start-ups (for example, the Khalifa fund<sup>78</sup>), there is an increasing need to avoid competition and overlap and to ensure complementarity of the various funding sources. There also needs to be a framework in place to delineate the role of public seed funding as a guiding investment to crowd-in private investors, and the exit or revolving strategy for such public seed funding to maintain long-term sustainability of public-private venture funds. An impact evaluation could be carried out under the component, or component 4, especially if other donor funding can be identified.

**35. The project’s success will depend on the government’s ability to manage risks associated with the digital economy development while proactively support the socially disadvantaged groups to take advantage of the new opportunities with the arrival of the digital age.** To address the evolving challenges of growing eCommerce and digital businesses as well as to combat anti-competitive practices and the potential resistance from the ‘offline’ sector (especially when it suffers job losses or profit losses due to the emergence of digital platforms), the government will need to set up a risk mitigation plan, and a mechanism to inform new and agile regulations (outside the scope of this project). Outreach campaigns beyond Addis Ababa targeting rural, or female, or disabled persons are supported. Stakeholders such as inter-governmental steering boards, digital competition authorities, and public-private cooperation bodies (including the civil society, private digital platforms, consumers, and government authorities) will be involved in developing such risk mitigation strategies and policy formulation.

**Links with other WB ongoing projects**

**36.** For components 1 and 2, analytical TA conducted under the Ethiopia Telecom Reform Program (P168536) as well as earlier work on developing a Digital Development Strategy for Ethiopia (P159381) provides an analytical underpinning. The proposed program of work under the Ethiopia Digital Foundations Project will bring benefits throughout the country portfolio, including for pipeline projects. The main expected benefits are summarized in table 1.

**Table 1: Digital Ethiopia project linkages with other projects in the Ethiopia portfolio**

Project and code	Title	Potential synergies and links (related digital Ethiopia sub-component)
P168566	Ethiopia Growth and Competitiveness	<ul style="list-style-type: none"> <li>The proposed synergies are linked to the three strategic pillars: (a) maximizing finance for development (sub-component 1.3). (b) boosting competitiveness through a better environment for the private sector (sub-component 1.1). (c) enhancing public transparency and accountability to promote</li> </ul>

<sup>78</sup> In February 2020, The Khalifa Fund for Enterprise Development (independent Socio-economic Development [an agency of the Government of Abu Dhabi] announced the signing of a US\$100 million agreement with the Ethiopian MoF aimed at supporting and financing micro, small, and medium-sized projects in Ethiopia. Since it is a revolving loan facility targeting SMEs that have the capacity to pay back, the WB grant can be a good complement to the Khalifa Fund targeting even earlier stage and high-risk enterprises.



Project and code	Title	Potential synergies and links (related digital Ethiopia sub-component)
		good governance (sub-component 1.2 and sub-component 2.1).
P169080 and P169079	COVID-19 Supplemental Financing to the Second Ethiopia Growth and Competitiveness Programmatic DPF and Second Ethiopia Growth and Competitiveness Programmatic DPF	<ul style="list-style-type: none"> <li>Boosting economic transformation in Ethiopia by increasing private sector participation and promoting good governance practices, including moving towards a sustainable financing model for Ethiopia's development (sub-component 1.1 and sub-component 1.3).</li> </ul>
P174874	Ethiopia WEDEP and Additional Financing	<ul style="list-style-type: none"> <li>Increasing earnings and employment of MSMEs owned or partly owned by the participating female entrepreneurs in the targeted cities, achieved through tailoring financial instruments to the needs of the participants and ensuring availability of finance (sub-component 3.1).</li> <li>Developing the entrepreneurial and technical skills of the target group and supporting cluster, technology, and product development for their businesses (sub-component 3.1).</li> </ul>
P169943	Urban Productive Safety Net and Jobs Project	<ul style="list-style-type: none"> <li>Improving the incomes of the urban poor and the labor market inclusion of disadvantaged urban youth (sub-component 3.1).</li> </ul>
P174206	Ethiopia: COVID-19 Education Response Project	<ul style="list-style-type: none"> <li>Maintaining students' learning during school closures in response to the COVID-19 pandemic and after school re-openings, and enable education system recovery and resilience (sub-component 2.3).</li> </ul>
P163829	Ethiopia Economic Opportunities Program	<ul style="list-style-type: none"> <li>Providing economic opportunities for Ethiopians and Refugees in an environmentally and socially sustainable way (sub-component 1.3 and sub-component 3.1).</li> </ul>
P164429 and P143302	Ethiopia Competitiveness and Job Creation Project-Additional Financing	<ul style="list-style-type: none"> <li>Contributing to job creation by attracting investments and improving competitiveness of enterprises in the targeted industrial zones and their linked domestic enterprises (sub-component 1.2).</li> </ul>
P163050	Ethiopia General Education Quality Improvement Program for Equity	<ul style="list-style-type: none"> <li>Improving internal efficiency, equitable access, and quality in general education (O-Class to Grade 12) (sub-component 2.3).</li> </ul>
P161373	Enhancing Shared Prosperity through Equitable Services	<ul style="list-style-type: none"> <li>Improving equitable access to basic services and strengthening accountability systems at the decentralized level (sub-component 2.1).</li> </ul>
P155103	Ethiopia CPF	<ul style="list-style-type: none"> <li>The project has synergies with the goals of               <ol style="list-style-type: none"> <li>promoting structural and economic transformation through increased productivity (sub-component 1.1).</li> <li>building resilience and inclusiveness (sub-component 1.2 and sub-component 1.3).</li> <li>supporting institutional accountability and confronting corruption (sub-component 2.1 and sub-component 1.3).</li> </ol> </li> </ul>

Note: The listing is intended to be indicative, not exhaustive.



#### Component 4: Project management (US\$7 million equivalent)

37. Subject to the Fiduciary Assessment, it is envisioned that the PIU will be set up at the MInT, to become operational once the project becomes effective. For implementation of the PPA, the COPCD within the MoF is managing implementation, working closely with the ECA and MInT, under the supervision of the MoF. This is because the focus of activity under the PPA is on Component 1 activities associated with telecom reform. Once implementation starts, and as the focus of the program shifts to Components 2 and 3, a wider range of implementing agencies will need to be involved, with the MInT taking the lead, but also including the ECA and EthERNet. During the preparation phase, staff for the future PIU will be recruited using funding from the PPA, along with consultants to carry out urgent preparatory studies on safeguards and preparation of the PPSD. The PPA is also being used to finance the immediate needs of the ECA, the rehabilitation of its premises and other start-up costs, and the transaction advisor for the partial privatization of Ethio Telecom. The PIU will transition from the COPCD to the new PIU within the MInT as the project progresses toward readiness, with the transition being complete by effectiveness. These criteria to be achieved to determine the timing of the transition from the COPCD to the MInT will include completion of the the Fiduciary Assessment of the capacity of MInT, full recruitment and training of the new PIU, and declaration of project effectiveness. The government has requested the ability to undertake retroactive financing so that various needs and feasibility studies for all components, and certain priority activities, can be conducted before the project is approved by the Board, though the PPA funds have been sufficient to date.
38. **The project will require coordinated implementation through a variety of Ethiopian agencies.** Component 4 will consist of support to finance project management related issues including project coordination, procurement, FM, M&E, project communication, citizen engagement, and environmental and social safeguards. This component will also provide support through office equipment, incremental operating costs, and audits. In addition to MoF (for the PPA, and ongoing work on Component 1) and MInT (for all components), the PEHAA will oversee the partial privatization of Ethio Telecoms under Subcomponent 1.1 and the ECA will have a significant role in implementing sub-component 1.2. Similarly, EthERNet, within the MoSHE, will assist in implementing sub-component 2.2. In addition to recruiting staff members of the PIU, for safeguards, procurement, FM, M&E, and so on, the project may also recruit technical specialists to assist with implementation, for instance the team of advisors currently working with the ECA, as well as technical specialists on government and higher education connectivity, and for digital business and entrepreneurship. The project will emphasize gender equity in recruitment and retention by ensuring inclusion of women in all decision-making bodies under the project.
39. **The PIU will be guided by** a PSC comprising all relevant entities, chaired by a State Minister of the MInT (or his/her designee) and including the MoF, the ECA, EthERNet, MoSHE, JCC, and the MoTI. The PSC will appoint a TC, reporting to it, to conduct specific tasks such as managing the grants and M&E reporting process for component 3. The TCs will extend their consultations also to the private sector, including the new market entrants. The project will also fund an impact evaluation study to capture the effects of enhanced connectivity on government MDAs and on higher education institutions, and the impact of new digital businesses on economic and labor markets as well as opportunities to close the digital divide and to promote gender equity. The TOR for the PSC and the TC will be defined during project implementation.
40. **The project directly supports key IDA19 corporate digital commitments** (see annex 5), and will track progress including:
- Number of people provided with enhanced access to broadband internet (of which women);



- Number of people with increased access to and usage of digital services (of which women);
- Number of people provided with universally accessible GovTech solutions (of which women); and
- Number of people with advanced digital skills.

**Component 5: Contingent Emergency Response Component (CERC, US\$0 million)**

41. A fifth component for a CERC is added to the project structure. This will have an initial zero value but may be financed during the course of the project to allow for an agile response to emerging events. Adding the component in from the beginning, albeit with zero funding, provides for flexibility to respond to crises as they arise; and a manual will be prepared to guide the utilization of this component including risk mitigation strategies. These could include, for instance, humanitarian crises which require the provision of emergency communications services to replace facilities that have been damaged, or to facilitate emergency humanitarian payments using mobile money. The primary issue at the time of writing is the COVID-19 pandemic which requires an urgent response, for instance in the form of additional broadband internet capacity for government offices, especially health centers and hospitals, and for government employees working from home.



## ANNEX 3: Technical, Economic and Financial Analysis

### COUNTRY: Ethiopia Ethiopia Digital Foundations Project

#### Technical Analysis

- 1. The Ethiopia Digital Foundations Project will deliver increased access to affordable and high-quality internet services for the government, businesses, and citizens while promoting digital entrepreneurship and creating digital jobs.** The project components were designed as an integrated and interlinked program to maximize the development impact of the investments. Investment is being complemented by TA, and regulatory reform to both increase access to ICTs and digital services while also enabling citizens, businesses, and the government with the skills, capacity, and incentives to use them to maximum advantage. This approach aligns with lessons learned from other operations and the findings of the WDR 2016, which highlights the need for both access to technology and complementary ‘analog’ enablers.
- 2. A policy, legal, and regulatory enabling environment contributes to reducing the costs and risks of private investment, which is key to develop the digital economy.** The project will focus on developing the telecom sector regulatory framework and improving the government capacity to create an enabling environment for the overall digital ecosystem. Policy and regulatory certainty give incentives to potential investors and new service providers when the country is trying to liberalize the telecom market, which has long sustained its monopoly by the state-owned operator. The project outputs will also include a functional separation of Ethio Telecom into infrastructure and services arms. This will allow its infrastructure arm to price and sell wholesale services to all market players when the new operators will have to make an initial huge infrastructure investment. It will also improve the SOE’s efficiency and operational effectiveness in the retail market. The new telecom regulatory framework drafted under the program PPA sets rights and obligations of the licenses, including network roll-out requirements to cover 95 percent of the population within five years. The mandatory requirement facilitates the infrastructure investments and promises to close the digital divide in rural areas where commercial incentives are small. The elements of the capacity building training to the senior government officials take an ecosystem approach by covering issues of enabling environments for future e-Government and digital financial services in addition to the support for digital infrastructure, digital businesses, and entrepreneurship.
- 3. The design of the project is based on a model of competitive, private sector delivery wherever possible, utilizing a ‘cascade approach’ in order to leverage private sector expertise and financing and to contribute to overall sector development.** The country has a few different options to develop its backbone or access networks: a direct government investment or a provision of incentives to attract private investment. Meanwhile, the operators in the competitive market, including the incumbent and the two new operators, will make the first move in proven commercially viable areas where there is no need for government intervention, but there can be significant delays in the timing of investment in new network capacity in other areas. The higher the network investment costs are, the greater the uncertainty about future financial viability is. The long-term pre-purchase agreements guarantee cost recovery for the investments and allow the investors to avoid the risk of asset stranding, assuring them to commit to the investment or capital-intensive



network upgrades. In addition, the award of bandwidth contracts will be based on technology-neutral competitive tenders and will induce the private sector to invest in the most cost-effective and efficient manner based on commercial decisions. The provision of connectivity to the targeted public institutions then allows them to serve as community anchor institutions. The program beneficiary institutions will share the high-capacity broadband services with those living in areas with non-commercially viable last-mile access, effectively reaching the otherwise unserved population.

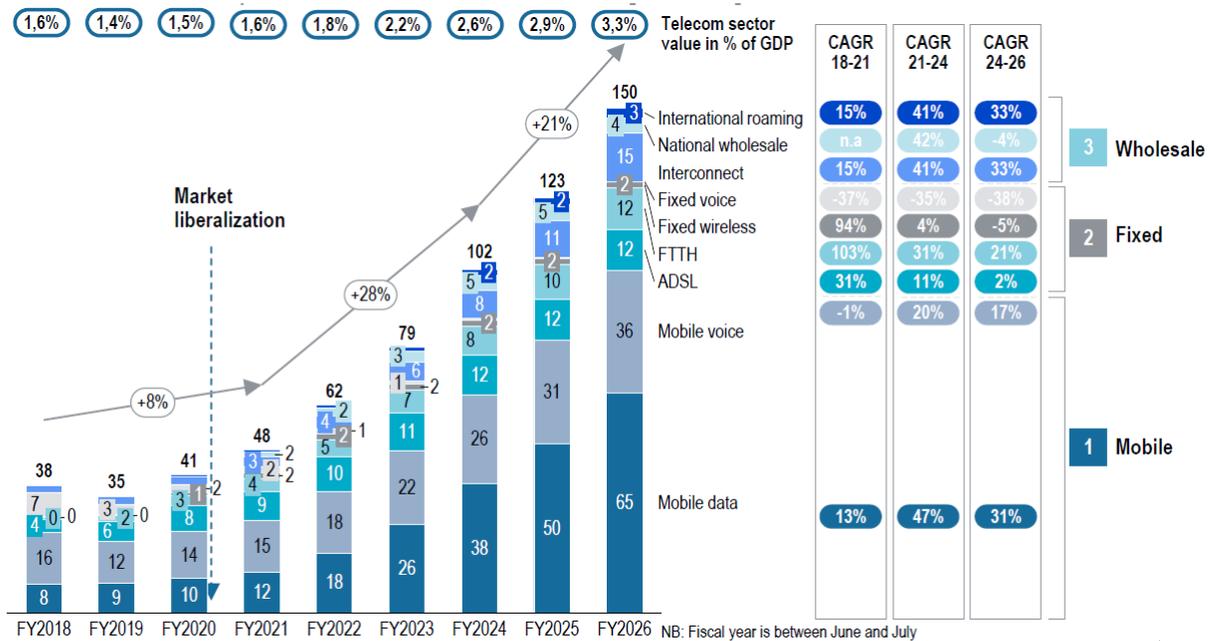
- 4. The project will support the network capacity required to connect higher education institutions.** It is estimated that the membership fee and the connectivity counterpart funding to join the EU AfricaConnect3 Program are US\$40,000 each. The US\$80,000 payment will then tap into the total EUR 37,500,000 budget made available by the European Commission and NRENs of Africa. Ethiopia will be connected to the regional backbone network that interconnects NRENs. In addition, the member institutions can attain economies of scale for large volume procurement of bandwidth and equipment as they build out the national backbone to connect in-country PoP to the nearest UbuntuNet PoP in the region. The UbuntuNet Alliance is also connected to the other regional research networks such as GEANT, the pan-European research and education network, allowing its members to participate in the global as well as the regional research and education community with the sufficient affordable internet bandwidth. In addition, the planned capacity-building support to the EthERNET's technical staff on network engineering and cybersecurity ensures that the network and services are provided and managed in a stable and sustainable manner.

#### Economic analysis

- 5. Revenue growth and efficiency gain for Ethio Telecom.** While Ethio Telecom's recent tariff cuts of 50 percent on most offers had a direct impact on revenues, it still enjoys strong EBITDA margin of 70 percent and compares favorably to some of its peers in the Africa region. The introduction of competition would pressure the margin to reach a more common level at 40-50 percent and average revenue per user (ARPU) to slightly decline in the next years, but the total revenue will still steadily grow as the number of subscribers increases. The growth of the total market size is expected in a stable regulatory framework supported by the Ethiopia Digital Foundations project. In addition, Ethio Telecom can benefit from a substantial efficiency gain and greater flexibility through functional separation and private sector management, which offers a means to attract innovation and management skills. The national wholesale market could generate up to Br 5 billion and Br 0.01 billion revenues in mobile and fixed, respectively, for Ethio Telecom in 2023. Meanwhile, estimates from the firm Roland Berger, hired by the WBG to conduct and in initial market assessment of Ethio Telecom, indicate that it will need to shed around 10,000 full-time equivalent (FTE) staff, or around 42 percent of its current workforce, to be on a par with a benchmark sample of telecom operators in nine other comparable countries.



Figure 1: Telecom market revenue growth projections for Ethiopia, 2018-2026, in Ethiopian birr, billions



Source: Roland Berger.

Notes: ETB = Ethiopian birr; FTTH = Fiber to the home; ADSL = Asymmetric Digital Subscriber Line; CAGR = Compound Annual Growth Rate.

6. **Government revenue growth.** The government will have a direct gain by raising considerable revenues from the sale of the two full-service licenses (expected to generate up to US\$1 billion each) as well as the possible sale of Ethio Telecom’s assets. With the growth of the subscriber base and the extended range of services offered, there will also be a boost in sales taxes and other fees (for example, annual license fees, excise taxes on handsets, universal service contributions, corporation taxes, and so on) from a larger, revitalized market. Moreover, the government will be able to generate revenue from the commercial utilization of scarce public resources including unused spectrum.

7. **Regulatory strengthening and FDI.** Recent research published by the ITU has demonstrated that a 10 percent increase in the quality regulatory governance is associated with a 7.3 percent increase in telecom sector investment.<sup>79</sup> As this project is heavily focused on support to the ECA, in Subcomponent 1.2, this should lead to a substantial improvement in Ethiopia’s regulatory standing. In 2019, Ethiopia was ranked as a ‘first generation’ regulatory environment by the ITU, with a score of just 29 out of 100.<sup>80</sup> The same study reports that the impact of opening the market to foreign direct investment in the telecom sector reduces prices by an average of 8 percent and increased coverage by the 13 percent and capital investment by 14 percent in the

<sup>79</sup> ITU (International Telecommunication Union). 2021. *The Impact of Policies, Regulation, and Institutions on ICT Sector Performance*. [https://www.itu.int/en/ITU-D/Regulatory-Market/Documents/Events2021/Impact\\_policies\\_regulation\\_and\\_Institutions\\_on\\_ICT\\_Sector\\_performance.pdf](https://www.itu.int/en/ITU-D/Regulatory-Market/Documents/Events2021/Impact_policies_regulation_and_Institutions_on_ICT_Sector_performance.pdf)

<sup>80</sup> <https://www.itu.int/net4/itu-d/irt/#/tracker-by-country/regulatory-tracker/2019>.



subsequent two years. The sale of up to 40 percent of the share capital of Ethio Telecom to a strategic partner, supported under Subcomponent 1.1 of the project, should help in realizing these expected benefits.

- 8. Increased internet penetration and connectivity.** Ethiopia’s projected user growth rate aligns with the IFC’s projection to have 110 million connections by 2025 with the market liberalization. The base case scenario combines multiple approaches to market sizing and a business plan of the existing incumbent, Ethio Telecom. The base case scenario estimates the average annual growth rate in mobile broadband users in Ethiopia will be 8 percent. The Ethiopia Digital Foundations Project is projected to accelerate the growth rate of mobile broadband users in Ethiopia to 16 percent per year until 2027. The benefits from the project are expected to come from the entry of two new operators to the market as well as the improvements in the regulatory environment. The ECA’s public notice preliminarily defines the coverage obligations of full-service licenses to meet the 85 percent of minimum population coverage requirement at the national level within 60 months of the services. The penetration of mobile broadband users is projected to grow to 76 per 100 inhabitants by 2027, which translates into a 29 percentage point increase compared with the base case scenario.

**Figure 1. Projected increase in total mobile broadband users (in millions)**

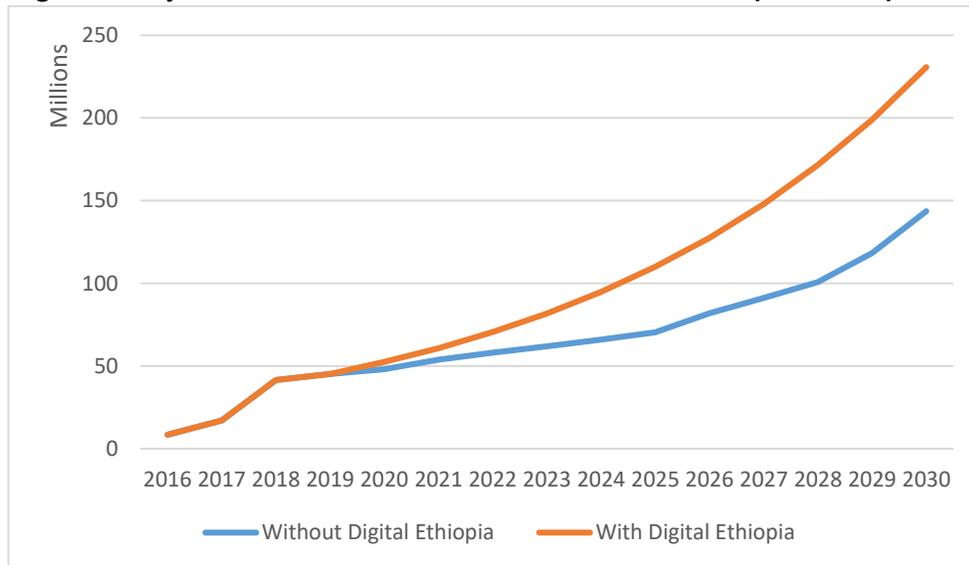




Figure 2. Projected increase in total mobile broadband users, per 100 Inhabitants

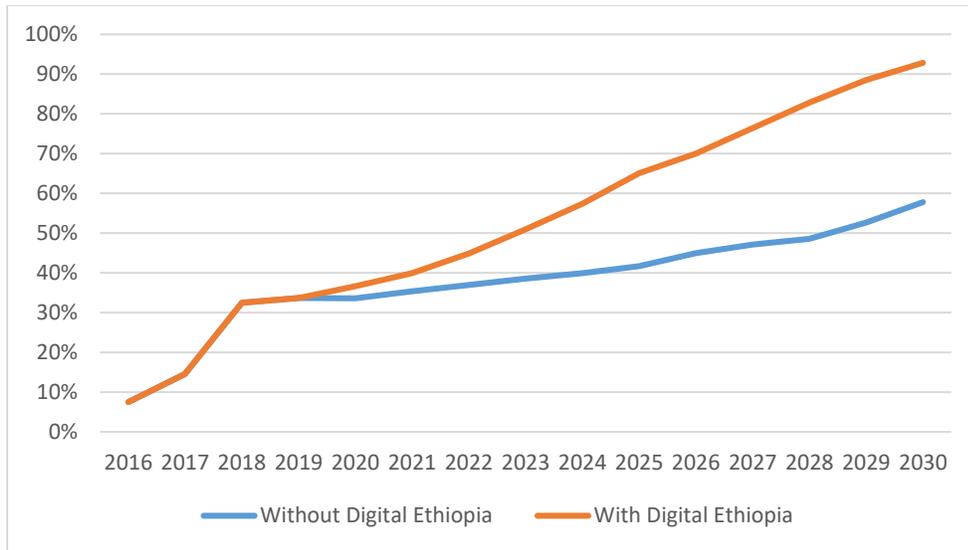


Table 1. Penetration rates, per 100 inhabitants, for selected countries, Q2 2020

	Ethiopia (%)	Kenya (%)	Nigeria (%)	Sudan (%)
Mobile phone (2G/3G/4G)	44.6	101.8	92.8	74.4
Mobile broadband (3G)	12	42.6	33.5	19.6
Mobile broadband (4G)	0.06	18.8	12.7	0.8
Household fixed broadband	0.9	4.4	0.8	0.5

Source: TeleGeography (www.telegeography.com)

**9. GDP growth.** A wide range of studies have demonstrated that a 10 percent increase in broadband penetration is associated with increased annual GDP growth, between 0.24 percent and 1.5 percent, and indirectly creates 1.5 to 4.5 jobs for every new job in the sector.<sup>81</sup> Surveys of East African households have shown that those with access to ICTs increased their income compared to those without access to ICTs<sup>82</sup>. Other studies conducted in Kenya<sup>83</sup> and Tanzania<sup>84</sup> link ICT investment with poverty alleviation and improvement of the business environment. As such, the increased connectivity, attributed to the Ethiopia Digital Foundations Project, will contribute to GDP growth. The accelerated connectivity supported by Digital Ethiopia will lead to a 2.64–4.40 percentage point increase in Ethiopia’s GDP growth in 2027.<sup>85</sup> The resulting increase in GDP

<sup>81</sup> See, for instance, ITU (International Telecommunication Union). 2019. *Economic Contribution of Broadband, Digitization and ICT Regulation: Econometric Modelling for Africa*. At: [https://www.itu.int/dms\\_pub/itu-d/opb/pref/D-PREF-EF.BDT\\_AFR-2019-PDF-E.pdf](https://www.itu.int/dms_pub/itu-d/opb/pref/D-PREF-EF.BDT_AFR-2019-PDF-E.pdf).

<sup>82</sup> May. et al., 2014. *Information and Communication Technologies as a Pathway from Poverty: Evidence from East Africa, ICT Pathways to Poverty Reduction*. (<http://www.idrc.ca/EN/Resources/Publications/openebooks/539-7/index.html>)

<sup>83</sup> Waema. et al. 2013 *Access and use of ICT and its contribution to poverty reduction in Kenya*. <http://www.idrc.ca/EN/Resources/Publications/openebooks/539-7/index.html#ch05>

<sup>84</sup> Mascarenhas. 2013. *Impact of enhanced access to ICTs on small and microenterprises in Tanzania*. <http://www.idrc.ca/EN/Resources/Publications/openebooks/539-7/index.html#ch06>

<sup>85</sup> Regression analysis by the World Bank estimates the results of the impact of mobile broadband in developing countries that are relatively



ranges from US\$1,857.79 million to US\$2,322.24 million in 2027. The analysis presents a benefit-cost ratio between 8.85 and 11.06 for an investment of US\$200 million. The expected internal rate of return (using CBA calculations) is between 122 percent and 141 percent. The project’s protected contribution to the GDP growth is expected to be even greater with the digital business and entrepreneurship component (component 3).

**Table 2. Benefits of increased internet penetration on GDP**

Projection	Without Digital Ethiopia (B)	With Digital Ethiopia (C)	Addition of Internet Subscribers with Digital Ethiopia (in millions)	Without Digital Ethiopia (D)	With Digital Ethiopia (E)	Percentage Point Addition of Internet Users with Digital Ethiopia	Addition to GDP Growth with Digital Ethiopia (Lower Bound, in %) <sup>a</sup>	Addition to GDP Growth with Digital Ethiopia (Higher Bound, in %) <sup>b</sup>	Addition to GDP with Digital Ethiopia (Lower Bound) <sup>a</sup>	Addition to GDP with Digital Ethiopia (Higher Bound) <sup>b</sup>
Year	Total Internet Users in Millions		(C-B)	Internet Users % (population growth adjusted)		(E-D)			In Millions	
2016	7.68			8						
2017	15.28			15						
2018	34.94			32						
2019	37.07			34						
2020	37.85	41.29	3.45	34	37	3	0.15	0.18	134.9	168.6
2021	40.83	46.07	5.24	35	40	5	0.22	0.27	206.9	258.6
2022	43.64	53.03	9.38	37	45	8	0.38	0.48	377.6	472.0
2023	46.56	61.5	14.94	39	51	12	0.59	0.74	629.0	786.3
2024	49.25	70.79	21.54	40	57	17	0.84	1.05	945.9	1,182.4
2025	52.53	82.09	29.56	42	65	23	1.13	1.41	1,353.1	1,691.3
2026	57.88	90.13	32.25	45	70	25	1.20	1.50	1,520.1	1,900.2
2027	63.16	102.43	39.26	47	76	29	1.41	1.76	1,857.8	2,322.2
Net Present Value (NPV)									1,769.3	2,211.6
Benefit-Cost Ratio (BCR)									8.85	11.06
Internal Rate of Return (IRR)									122%	141%

Note: a. The lower bound uses the 0.048 percentage points as the addition to annual GDP growth for a 1 percentage point increase in internet penetration.

b. The higher bound uses 0.060 percentage points as the addition to annual GDP growth for a 1 percentage point increase in internet penetration

Annual GDP growth rate referred to IMF historical trend and projection (2016-2021); Statista (2022-2024); and used trend analysis for 2025-2030 (linear trend based on the previous five years’ growth rate).

robust across both the base specification and a wide series of different full-period (2005-2015) specifications, suggesting that a 10 percentage point increase in the mobile broadband penetration rate (say, from 20 percent to 30 percent) increases annual GDP/capita growth by approximately 0.48-0.60 percentage points. This range has been used to provide the range for the CBA above.



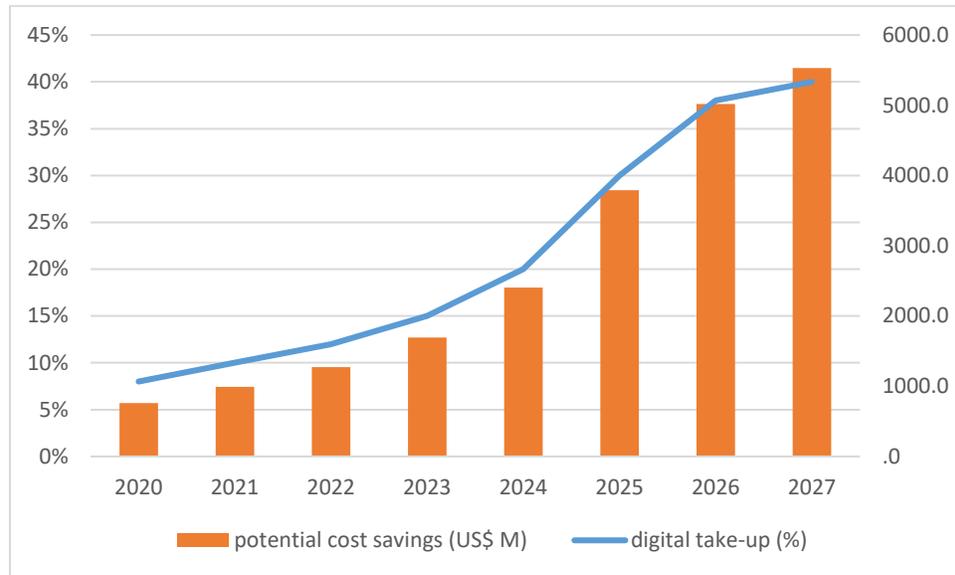
- 10. Poverty reduction.** In addition, the proposed activities are expected to have direct and indirect poverty-reducing effects. Introducing competition in the ICT sector is expected to improve service delivery for households and businesses while reducing costs and increasing penetration. Preliminary estimates using the WELCOM simulation tool<sup>86</sup> suggest that the opening of the sector is expected to trigger a decline in prices by 25 percent in the short term and by up to 67 percent in the long term. This fall in prices will see a 13.6 percent proportional increase in the take up of mobile services. Using WELCOM's results, this will induce a reduction in poverty by 0.2 percentage points in the short term and 0.8 percentage points in the longer term. No significant negative distributional impacts are expected.
- 11. Reduced household expenditure on travel and GHG reduction.** Increased connectivity will enable the digital economy to grow and will allow citizens to reduce spending on travel, which is expected to result in savings of approximately 0.02 percent of GDP over 10 years (2027). As of 2010, it was estimated that 2.05 percent of Ethiopia's per capita consumption was spent on transport. Savings will be realized if new broadband users substitute as little as 10 percent of their travel time by accessing services and information over the internet/digital platforms (such as health advice, access to government services such as business licenses, tax payments, utility payments, extension information and market prices for agricultural goods).
- 12. Improved public sector efficiency.** The connectivity infrastructure for public institutions will greatly improve government efficiency. The government is planning on rolling out comprehensive e-Government services leveraging the nation-wide public service networks to be developed as part of the Ethiopia Digital Foundations Project. The online-based applications generate savings on data collection and transmission on a shared public information system, reducing administrative costs and eliminating duplications. According to the Digital Efficiency Report, the average cost of a digital transaction is almost 20 times lower than the cost of a telephone transaction, about 30 times lower than the cost of postal transaction, and about 50 times lower than a face-to-face transaction. While shares of transaction-related costs are varying across departments and agencies, estimated total administration cost of managing these services in Ethiopia is approximately 37 billion ETB which is around 10 percent of the total government expenditure. Assuming that digital take-up for the services is around 30 percent by 2027, it is estimated that around ETB 70-71 billion (US\$21-22 million) cumulative cost savings can be made by 2027.
- 13. Educational and research institutions.** The project will also reduce connectivity costs for Ethiopia's educational institutions and enable access to regional and global educational content and research. The prevailing wholesale market rate for international bandwidth is US\$0 per Mbit/s per month in Ethiopia. Through support to EthERNET and participation in the Africa Connect 3 Project, bulk bandwidth costs are expected to drop to below US\$5 per Mbit/s month, an eightfold reduction in spending, per unit price (though capacity usage is expected to rise because of increased bandwidth).

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<sup>86</sup> The WELCOM (Welfare and Competition) simulation tool was developed by the Poverty and Equity Global Practice at the WB. WELCOM estimates the distributional effects focusing on the price channel, simulating a change in prices in the good or market of interest as a result of changes in the competition conditions. Under the most basic approach, WELCOM simulates as the change in welfare for those households with positive consumption using a Laspeyres well-being money metric measure. For more information please refer to: Aaar. Abdelkrim, Eduardo Alonso Malasquez, Sergio Olivieri, and Carlos Rodriguez Castelan. 2018. "Introducing WELCOM: A Tool to Simulate the Welfare Impacts of Competition. Version 2.1." <http://dasp.ecn.ulaval.ca/webwel/welcom.html>.



Figure 4: Potential cost savings in relation to take-up of digital services



**14. The Ethiopia Digital Foundations Project will create an enabling environment for digital innovation, economic growth, and greater access to information.** The potential is especially high in sectors such as education, health, finance, and agriculture. The project will provide for increased bandwidth at lower costs for universities, linking teachers and students to e-Learning opportunities and internet-facilitated curriculum enhancements. Agricultural stakeholders will be able to reduce market imperfections through information sharing on input prices, market prices for crops, while improving access to credit and insurance markets and mitigating crop failures and weather risks. It will facilitate an increase in the adoption of e-Health services, improving delivery and access to health information and services and reducing time and money spent traveling and waiting to visit a health service center.

**15. Increased funding and entrepreneurship support will lead to the growth of Ethiopia’s private sector.** New digital solution companies will be established and technology will be adopted more widely by traditional companies, increasing efficiency and access to new domestic and international markets using digital platforms. Digital literacy and digital inclusion efforts will help ensure that more citizens are equipped to take advantage of digital technologies and services and are better equipped for the jobs and economy of tomorrow. Drawing lessons from the past 20 years of WBG’s matching grant programs to increase private sector competitiveness,<sup>87</sup> the M&E framework for this project has two indicators that measure ‘spillover’ or ‘additionality’ effects of matching grants. The first indicator measures the extent to which private investors have been crowded to provide risk capital for digital start-ups (sub-component 3.1, matching grant window 1), while the second indicator measures whether new types of digital business model firms (that is, digital platform and data-driven firms) are increasing their presence and penetration in Ethiopia’s (digital) economy (sub-component 3.1 matching grant window 2) with increased economies of scale and network effects by recruiting and training more suppliers. The creation and growth of commercial digital platforms and data-

<sup>87</sup> “World Bank. 2016. *How to Make Grants a Better Match for Private Sector Development*. World Bank, Washington, DC. World Bank. <https://openknowledge.worldbank.org/handle/10986/26434>. License: CC BY 3.0 IGO.



driven firms also have additional economic benefits via reducing unproductive intermediaries in value chains (box 1 below) and increasing information transparency. However, the risks of ‘winner-take-all’ by these new digital business models should also be highlighted and tackled as part of the digital market regulation TA in sub-component 3.2.

**16. Based on experience from other countries, the indirect impacts will likely be larger and more transformative.** The successful reforms supported by capacity building at both basic and higher education levels are expected to incentivize more people to use mobile services, connecting the previously unconnected to information, markets, and services. If complementary reforms in other sectors are enacted, to be supported by component 3, for example, mobile devices can help poor people manage credit better with lower transaction charges and can improve their ability to cope with risks, thereby reducing vulnerability and poverty. Mobile money offers great promise in increasing resilience, reducing risks and smoothing consumption through formal and informal insurance, and extending financial services to the large share of unbanked people in Ethiopia.

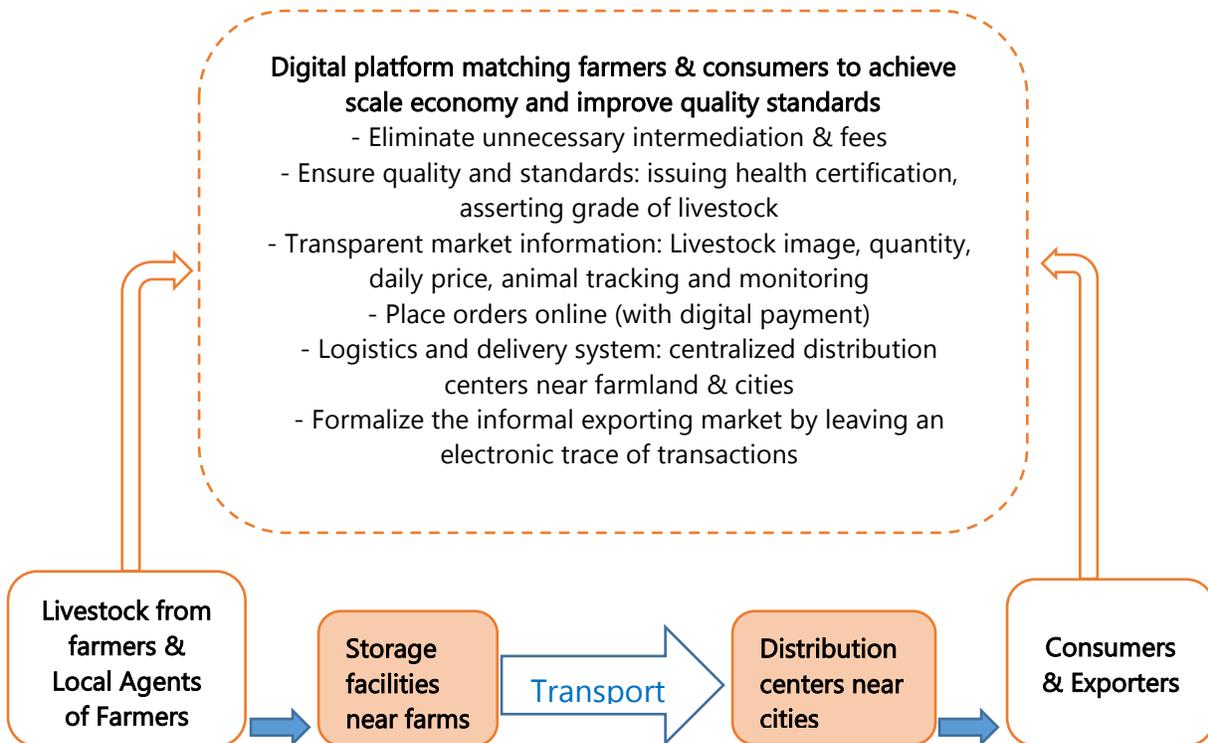


**Box 1: An Example of Digital Platform’s Value in the Livestock Market in Ethiopia**

*Traditional informal value chain: Unclear value proposition of intermediaries*



*A Digital Platform Business Model: Reduce market frictions, increase producer and consumer welfare*



Source: Staff summary of key informant interviews with digital start-ups and commercial digital platform literature: Luo, Xubei, and Chiyu Niu. 2019. "E-Commerce Participation and Household Income Growth in Taobao Villages." (2019). Harris, Roger, and Doug Vogel. Forthcoming. "E-Commerce for Community-Based Tourism in Developing Countries."



## ANNEX 4: Gender

### COUNTRY: Ethiopia

#### Ethiopia Digital Foundations Project

1. The purpose of this assessment is to elaborate on gender-relevant considerations. The assessment (a) identifies gaps between the experiences and status of women and men relevant to the above project, (b) identifies project activities to address these gaps, and (c) identifies suitable indicators to be incorporated in the Results Framework to track progress. This assessment is based on information from a desk-based document review including gender literature, regional policy and guidance notes, and international best practice standards.
2. Ethiopia has experienced remarkable economic success in recent years. In the past decade, its average annual growth rate far exceeded the regional average, at slightly over 10 percent relative to a regional 5 percent. Despite Ethiopia's remarkable economic success over the last decade, women continue to face significant barriers in the workforce. A lack of opportunities for women in education, health, and human rights constrains women differentially than men. The following sections analyze gender gaps and actions under two key priority areas addressed by the Ethiopia Digital Foundations Project—Women's Economic Empowerment and Entrepreneurship, and sex-disaggregated data on internet access and use.

### Priority Focus Areas for the Ethiopia Digital Foundations Project

#### A. Women's Economic Empowerment and Entrepreneurship

3. **Analysis: Gender disparities are profound, as indicated by the low economic, educational, and empowerment status of women in the country.** There is a long history of gender inequality in Ethiopia, with poorer women and girls especially facing multiple disadvantages. Women experience high rates of unemployment (6.5 percent<sup>88</sup>), seasonal employment (37 percent), and temporary employment (13 percent), with these rates increasing as a result of COVID-19.<sup>89</sup> Women lag men by 79 percent in business sales, and by 44 percent in hourly wages<sup>90</sup>. This is partly attributable to unequal access between men and women to education and vocational training as well as to labor markets. In entrepreneurship, women tend to work fewer hours than men, hire labor less frequently, use less credit, and are less likely to have a business license—contributing to the gender gap in business sales. Around 58 percent of Ethiopian women are illiterate. The educational attainment gap is much higher among the rural population than among the urban population. According to the UNDP's GEM, females and males held 27 percent and 73 percent, respectively, of positions for legislators, senior officials, and managers in Ethiopia, ranking the country 80 out of 145 countries with a score of 0.36. For the professional and technical positions, 33 percent and 67 percent were held by females and males, respectively.
4. Data from the 2011-2016 Ethiopia socioeconomic surveys analysed in the Ethiopia Gender Diagnostic Report show that women receive fewer agricultural extension services than men, the primary platform through which

<sup>88</sup> Latest available data is from the 2013 Labor Force Survey.

<sup>89</sup> FAO (Food And Agriculture Organization). 2019. *Ethiopia: National Gender Profile of Agriculture and Rural Livelihoods*. <http://www.fao.org/3/ca3224en/ca3224en.pdf>.

<sup>90</sup> Buehren, Niklas, Paula Gonzalez, and Amy Copley. 2019. *What Are the Economic Costs of Gender Gaps in Ethiopia? Gender Innovation Policy Initiative*. World Bank, Washington, DC. © World Bank. <https://openknowledge.worldbank.org/handle/10986/31441>.



smallholder access information about new technologies and information. Women are therefore less exposed to and aware of new techniques, farming knowledge, and management practices. While policies have recognized and prioritized the importance of closing the gender gap in access to extension services, effectively addressing them remains a challenge.

5. Data also suggest that women access formal credit less than men and are less likely to own a business license. Data from the Ethiopia socioeconomic surveys show that female farm managers are 9 percentage points less likely to access credit, leading to smaller firms, lower profitability, and little ability to grow beyond a subsistence level. Indeed, women-managed enterprises are also less likely to have a business license: only 15 percent of female managers operate an enterprise with a business license, compared to 37 percent of male managers. This in turn affects their ability to apply for large contracts, enhance sales, and in general close the earnings and wealth gender gap.
6. **Actions: Component 1** enables, through sector reform, access to affordable and higher quality internet services. This is expected to lead to a significant increase in the level of mobile internet usage, throughout the economy, including improved access for women. Affordable, high-speed internet is known to be associated with socioeconomic empowerment by increasing users' access to services, including education, employment and health. Women will particularly benefit from the improvement in the affordability of smartphones and improvements in the affordability of services, and an extended range of digital financial services which is expected as an outcome of the market liberalization process under component 1. That is because women's disposable income in Ethiopia is lower than that of men, so lower prices will benefit them disproportionately. As such, access to digital services can be particularly beneficial to marginalized and vulnerable populations to help improve their voice in decision making processes, engagement with government services and inclusion within the digital economy.
7. **Sub-component 2.3** focuses on improving human endowments and removes constraints to better jobs. Female students will benefit from the connectivity to more universities, TVETs, and eventually secondary schools. Having early access to digital technologies during their formative years can help women build careers in ICT and in services which make heavy use of ICTs, such as advertising or design.
8. **Component 3** is intended to provide expanded opportunities for women to further their careers through digital entrepreneurship and income generation through digital tool adoption. Although computer sciences have sometimes been favored by men, these more technical skills are now perhaps less relevant than the ability to make productive use of digital skills for communication, for instance, on social media or through social networking for productive purposes. This is levelling the scales and enabling more women to take the lead in setting up digital start-ups or using digital tools to empower their analog businesses. The matching grants program will be guided by principles of equal opportunity and will use quotas to ensure that women are well represented. Window 2, in particular, will provide a chance for women in the analog economy to receive training and digital devices to generate income in the digital economy.
9. **M&E.** The results framework of the project is to track the progress of women in several of the key activities of the project. Similarly, the PDO indicator on the number of jobs created, or sustained, in the digital economy will focus on the percentage of jobs created for women as well as for disabled persons and the rural population. Among the intermediate indicators, both the number of students benefitting from enhanced internet access and the number of government officials receiving training in digital skills are tracked for their gender balance. Similarly, women in



the founder team of digital start-ups will be tracked for component 3.

**B. Gender-disaggregated data on internet access and use**

10. **Analysis.** Globally, as of 2019, the internet user gap between men and women is 17 percent,<sup>91</sup> and over 300 million fewer women than men access the internet on a mobile phone. The gender gap is even larger in the world's least developed countries (LDCs) at 31 percent. There is a lack of gender-disaggregated data on user adoption of telecommunications services, which presents a constraint in assessing women's access to different telecommunication services. Women's access to digital technologies, in general, is lower than that of men due, in part, to persistent gaps in women's education and awareness, lower financial capacity to cover the costs associated with digital access, and limited decision making power at the household level, among other issues. An estimated 58 percent of Ethiopia women are illiterate, and it is estimated that fewer than 12 percent of women have internet access in Ethiopia. Expanded access to internet services can enhance adoption, and there is a need to collect disaggregated data to monitor gaps, if any, that may arise as digital infrastructure and penetration increases. Currently, no legal or regulatory provisions for the collection of sex disaggregated telecommunications data exist.
11. **Action.** The project is expected to respond to these concerns through M&E on gender issues throughout the program and provide support and guidance to the regulator ECA and others to ensure collection of sex-disaggregated statistics around telecommunications subscriptions, access and use. The project includes TA for the ECA and the Women Affairs Directorate to: (a) conduct a study on the different constraints that men and women face in the telecom sector, and to (b) propose actions that need to be put in place to improve the participation of and benefits for women in the sector. The project will also conduct stakeholder consultations with women's groups for outreach, to collect qualitative data, and inform future project design and implementation.
12. **M&E.** The project includes mechanisms to monitor gender impact and facilitate sex disaggregated analysis. Of relevance to this priority area is one of the key PDO indicators, tracking the increase in the number of internet users, of which there is a dedicated sub-indicator for female users.

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<sup>91</sup> ITU (International Telecommunications Union). 2019. *Bridging the Gender Divide*. <https://www.itu.int/en/mediacentre/backgrounders/Pages/bridging-the-gender-divide.aspx#:~:text=In%202019%2C%20%E2%80%8Bthe%20proportion,the%20CIS%20countries%20and%20Europe.>



**ANNEX 5: How Digital Ethiopia will contribute to meeting IDA-19 digital commitments**

**COUNTRY: Ethiopia**  
**Ethiopia Digital Foundations Project**

IDA19 Theme	Area	Policy commitments	Contribution of the proposed operation
<b>Fragility, Conflict and Violence</b>		Support building client capacity in 50 percent of IDA FCS countries to use field-appropriate digital tools for collection and analysis of geo-tagged data; and apply this technology to enhance project implementation and coordination	N/A
<b>Governance and Institutions</b>	Public service delivery	Support 10 IDA countries to adopt universally accessible GovTech solutions	By strengthening and expanding the internet connectivity of public institutions, and building digital skills of government officials, the project (especially through component 2 interventions) will provide the foundations for building GovTech solutions going forward, to improve access and quality of government services. Furthermore, sub-component 1.3, supporting the general development of the digital economy, will provide further assistance to create, strengthen and regulate public digital platforms, in coordination with other WBG interventions.
<b>JET</b>	Creating and connecting to markets	IDA commitments to close the digital infrastructure gap by reaching 30 percent broadband penetration in at least 20 IDA countries in the African continent by 2023	The project is targeting to provide 5 million Ethiopians with improved access to broadband internet and to reduce broadband internet prices per month, as a percentage of a country’s average monthly GNI per capita, from US\$12.60 to below US\$5.00. This will significantly contribute to closing the digital infrastructure gap in Ethiopia. Laying digital foundations to enable the growth of digital economy in Ethiopia will unlock numerous opportunities across high-potential sectors in Ethiopia, creating create additional digital and non-digital jobs (for example, distribution center managers, animal health inspector, tracking device



IDA19 Theme	Area	Policy commitments	Contribution of the proposed operation
			<p>manufacturers). For example, adopting a digital platform solution to connect farmers and end consumers directly can reduce search, tracing and transaction costs, potentially helping farmers expand access to markets, achieve economies of scale, and generate higher income (supported by interventions under component 3 of the project).</p>
	Building capacities and connecting workers to jobs	50 percent of entrepreneurship projects will incorporate digital financial services and/or digital entrepreneurship elements—and ensuring they address particular constraints facing women and/or persons with disabilities	Component 3 is dedicated to digital entrepreneurship and helping digital start-ups gain access to risk capital, and includes intermediate indicators tracking women and PDO indicators of jobs created for women and disabled persons.
<b>Gender and Development</b>	Removing constraints for more and better jobs	At least 60 percent of IDA19 financing operations for digital skills development will support women's access to online work	Through interventions outlined in component 3, the project aims to nurture digital entrepreneurship and incentivize digital MSMEs to train and employ Ethiopian suppliers to participate in the digital economy, and thereby to generate income and jobs. In terms of direct support to offline MSMEs, the project is focusing on addressing access to finance and access to digital skills constraints (through sub-component 3.1,) and more broadly, through interventions under sub-component 2.3 to strengthen ICT in education, and sub-component 2.1 to increase connectivity, the project is creating enabling environment for digital MSMEs. A special focus will be placed on reaching women, youth, and disabled persons and farmers in rural areas who are currently lacking means and information to take advantage of the digital economy. The results framework includes special targets for women and people with disabilities.
	Removing barriers to women's	All IDA19 financing operations for Digital development will support women's increased access to ICT services and take	Interventions to foster digital entrepreneurship will place special emphasis on women, for example,



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IDA19 Theme	Area	Policy commitments	Contribution of the proposed operation
	ownership of and control over assets	steps to increase women's usage of services	connectivity support for the provision of university and TVET courses, will include particular effort to get more women involved (under sub-component 2.2). The design of the Digital Adoption and Inclusion Grants to Digital Businesses will include incentives to train and provide digital device to women who are currently lacking means and information to take advantage of the digital economy.



## ANNEX 6: How Digital Ethiopia will contribute to developing a digital response to the COVID-19 pandemic

### COUNTRY: Ethiopia Ethiopia Digital Foundations Project

#### Objectives of COVID-19 Support

1. Every economy in Africa was being hit hard in 2020-21 by the COVID-19 pandemic, though expected country-specific magnitudes remain highly uncertain. As of March 2, 2020, there had over 160,000 cases in Ethiopia resulting in around 2,386 deaths to date.<sup>92</sup> Although this project was in preparation before the pandemic struck, the project design has been adapted to provide a digital response to COVID-19 with the following characteristics.

#### Objective 1: Increasing bandwidth and managing congestion to keep the internet from ‘breaking’

- Telecom operators in many countries have declared to regulators their lack of readiness to operate their networks under the increased strain of a 30-40 percent increase in traffic as a result of increased use of remote working technologies, and the effects of lockdown on increased usage of social media.
- This calls for changes in network configuration, traffic management, and access to spare capacity in infrastructure to provide connectivity to institutions, households, and SMEs. Due to the expected increased need for utilization of internet capacity that is occurring, there is a requirement for enhancement of the current capacity, especially for GoE Institutions, so as to confront the outbreak. By accessing the funds under this project, the government will have access to increase internet bandwidth under a pre-purchase scheme, to facilitate remote working and learning (component 2).

#### Expected Results

- Government business continuity during COVID 19 lockdown by having enhanced facilities for remote exchange of information (for instance by developing a network of government communications rooms under sub-component 2.1)
- Confirmed service delivery to Citizen G2C especially in public places, that is, universities and schools, hospitals, and so on
- Information and awareness dissemination on the outbreak, for instance via SMSs
- Optimization of the existing ICT infrastructures for combatting COVID-19
- Operators will be encouraged to develop special packages to reduce costs for the end users and ease the financial pressure on internet providers; introducing competition, under component 1, will help in spurring price innovation in this context

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<sup>92</sup> Data from the John Hopkins University site at: <https://coronavirus.jhu.edu/map.html>.



### **Objective 2: Ensuring the continuity of public services to safeguard the welfare of populations**

- Many client countries cannot use digital throughout their territory as the ‘new normal’ for work, schooling, and government services because of the digital divide, and some regions risk being left further behind if the crisis expands or repeats.

#### **Expected Results**

- Availability of online learning content and ability to deliver it electronically, to enable remote learning during and after crises.
- Reduction of the digital divide in remote and rural areas through provision of mobile broadband coverage (4G and above) by competing operators introduced, and by rollout targets achieved, under the project.

### **Objective 3: Powering FinTech to support the most impacted businesses and communities**

- Economies are increasingly relying on fintech to stay afloat, and demand for services such as mobile payments, food delivery, and eCommerce shopping will grow exponentially especially as a means of combatting COVID-19.
- This calls for action to connect the unconnected by providing emergency broadband infrastructure, particularly in remote and underserved areas, and by promoting the growth of eCommerce.

#### **Expected Results**

- Broadband continuity and services delivery during and after COVID-19.
- Identification of untapped revenues on Fintech after COVID-19 and extended digital coverage and services to citizens.
- Promotion of eCommerce in particular through Ethiopia’s membership of the eCom@Africa initiative, and by support to digital platforms under Component 3.

### **Instruments/Modalities**

- a) In April 2020, the WBG committed around US\$82.6 million in funding to support Ethiopia’s COVID-19 response under the Fast-Track COVID-19 facility and a further US\$250 million is projected under the supplementary financing for COVID-19 response under the second Ethiopia Growth and Competitiveness DPF.<sup>93</sup>
- b) As noted above, this project includes a number of activities which are specifically designed to assist the government in its COVID-19 response. The PPA that was agreed in October 2019 allows for retroactive financing, so the government can make an early start on these initiatives.
- c) A CERC has been added to the project design, with value initial zero, that can be activated once the project

<sup>93</sup> <https://www.worldbank.org/en/news/press-release/2020/06/17/world-bank-provides-additional-support-to-help-ethiopia-mitigate-the-economic-impacts-of-covid-19#:~:text=In%20April%2C%20the%20World%20Bank,systems%20for%20public%20health%20preparedness.>



is effective and can address future emergency operations. This will require some additional work to develop a manual that sets out the conditions under which the CERC may be activated and how the funds may be employed.

**COVID-19-related activities under modified project design:**

**a) Digital Economy**

- a) Review legislation and adopt regulations to leverage use of dark fiber (a term that refers to unused fiber optic cable).
- b) Permit competitive market entry in telecommunications and thus increase the level of supply and investment in productive network capacity
- c) Set rollout targets for new market entrants to reach and setting up a USF to promote rural connectivity.

**b) Digital Government and Connectivity**

Within this activity, more attention can be given to activities that address business continuity. This can include an activity to temporarily provide resources for government officials to access internet (that is, vouchers for paying internet connection to enable remote working), both in terms of required equipment and broadband connectivity. Also, this will include support for establishing Communications rooms and purchasing additional video conferencing equipment to equip key ministries, universities, and other government locations. In hospitals, for instance, it could be used to enable telemedicine. Purchase of additional broadband capacity in wholesale market in bulk is planned to distribute to critical services: hospitals, schools, and other critical government services.

Under the education subcomponent 2.3, the project will support quick deployment of e-learning connectivity to enable students to study from home. This can include pre-purchase of additional internet capacity, providing devices with connections to internet to students and teachers, supporting quick deployment of public WiFi networks, and supporting access to external e-learning platforms.

**c) Digital Businesses and Entrepreneurship**

This component will prioritize support, through the matching grant programs, for those businesses that have intended developmental outcomes, including COVID-19 response. This could include, for instance, promoting businesses that rely on a digital financial services platform rather than requiring payment in cash. It will also support eCommerce companies and platforms that can provide home and office delivery, thus reducing requirements for physical travel. Companies that offer online platforms, for instance for remote working or for online learning or e-health, will also be supported.



## ANNEX 7: World Bank Group Response to COVID-19 in Ethiopia

COUNTRY: Ethiopia

Ethiopia Digital Foundations Project

### I. Impact of the COVID-19 pandemic on the country and government response

- 1. The outbreak of the Coronavirus Disease 2019 (COVID-19) pandemic has had a serious health impact.** As of mid-February 2021, over 154,000 COVID-19 cases with over 2,300 fatalities were registered, with a sharp acceleration in recent months. These figures are the second largest in absolute terms among Sub-Saharan African countries, after South Africa, though the caseload and mortality as a percentage of the population are near the median for the overall region. The pandemic has overstretched the health system and affected the delivery of essential health services. Other socio-economic impacts being felt across Ethiopia are already wide-ranging and serious, with the potential to become severe, depending on the combination of the pandemic's trajectory and the effects of countermeasures.
- 2. COVID-19 is seriously threatening Ethiopia's gains in growth and poverty reduction.** Ethiopia grew at 6.1 percent in fiscal year (FY) 20, compared to 9 percent in FY19, as the impact of the COVID-19 pandemic took place largely in the final quarter of the fiscal year. However, the collapse in external demand experienced since the onset of the COVID-19 crisis, coupled with the effects of restrictions in domestic demand, is expected to result in a further growth slowdown in FY21. Merchandise exports, excluding gold, declined by 11.9 percent during July-September 2020 (year-on-year). Both exports and imports of services, dominated by air transport, recorded negative growth in FY20. Meanwhile, foreign direct investment has been severely hit, with inflows declining by 20 percent in FY20, contributing to weakening reserve levels. The consequent reduction in government revenue is putting pressure on its provision of social services. Government spending and investment has been an important engine of poverty reduction in the past and reduced spending resulting from decreased government revenue and foreign exchange may have detrimental long-term effects on the poor.<sup>94</sup>
- 3. Economic impacts of COVID-19 are already being felt by households, and although impacts are more severe in urban areas, rural households are also affected.** High-frequency monitoring surveys<sup>95</sup> of households conducted by the WB in Ethiopia since April 2020 shows that the COVID-19 pandemic is affecting economic activity, households' incomes, and food security. The survey results indicate that by April 2020 about half of households had experienced either a reduction or a total loss of income since the viral outbreak. Though fewer households have subsequently reported further income erosion, apparently income losses have not yet bottomed out: a quarter of them reported reductions between August and September. Food security is a major concern in Ethiopia, particularly for rural residents, and is at the heart of the country's social protection system. According to the COVID monitoring survey about four in ten rural households in Ethiopian were still experiencing moderate or severe food insecurity in September compared to 30 percent in urban areas. An estimated 1.4 million jobs, accounting for 19 percent of current employment, were estimated to be threatened due to the crisis during the second half of 2020.

<sup>94</sup> World Bank. 2020. "Covid-19: Potential Poverty and Social Impacts in Ethiopia and Policy Responses." *Poverty and Equity Global Practice: Ethiopia COVID Response Notes*.

<sup>95</sup> <https://www.worldbank.org/en/country/ethiopia/brief/phone-survey-data-monitoring-covid-19-impact-on-firms-and-households-in-Ethiopia>.



- 4. The pandemic and associated containment measures have adversely impacted the private sector, particularly in the horticulture, hotel, tourism and travel sectors as well as manufacturing firms in the industrial parks.** In FY19, export revenues generated from the horticulture sector—which includes flowers, fruits, vegetables, herbs and spices—stood at US\$ 318 million. Following the outbreak in early March, most European and Middle Eastern countries closed their borders. As a result, the horticulture sector has suffered a significant loss. In a similar vein, the private sector in the apparel and garment industry experienced an unprecedented global demand shock. Disruptions to the global value chains continue to weigh on the supply of intermediate inputs and imported raw materials, which are vital for the manufacturing sector. Against this backdrop, several SMEs have shifted their production lines to fulfill the growing need for both personal protective equipment (PPE) and items for consumer use such as masks and hand sanitizers. As most workers in industrial parks are women, the pandemic weighs more adversely on women’s participation in the labor force.
- 5. The government health services response to COVID-19 has been robust.** The GoE declared a state of emergency under Article 93 of the constitution on April 8, 2020. It moved quickly to institute measures to limit the spread of COVID-19, including outreach activities for awareness raising and behavioral changes, expanding COVID-19 testing capacity and institutions to provide clinical care and quarantine for COVID-19 suspects and patients; and establishment of a multisectoral COVID-19 response taskforce and coordination platforms at each level of government.
- 6. The government has also adopted several measures to address the social and economic impacts of the pandemic.** Measures aimed at mitigating the impacts on people include additional expenditure on healthcare, indexation of safety net benefits, provision of temporary incomes support and/or emergency food aid to the vulnerable, introduction of guidelines to ensure the distribution of agricultural inputs. To support firms, authorities have adopted temporary tax exemptions and preferential access to currency for those firms importing raw materials and equipment to be used in the prevention and containment of COVID-19, and have allowed businesses to carry forward the loss incurred this fiscal year, as well as to take advantage from some tax deferrals and waivers. In the financial sector, the NBE has availed ETB 15 billion (US\$ 372m) liquidity in support of private commercial banks, to allow them to provide debt relief and refinancing to customers in need, and forbearance limits have been extended. In addition, mobile banking limits at the Commercial Bank of Ethiopia have been increased, and a new eTransactions Proclamation has been adopted by the Parliament. The government adjusted quickly its rural and urban Productive Safety Net Programs (PSNPs) by waiving the work requirements, increasing coverage to more beneficiaries and increasing temporarily the benefit amounts paid to particularly vulnerable households. The government also decided to expand the urban PSNP to more cities more quickly to provide support for particularly affected urban poor households (including refugees and host communities), and also promote youth employment and enhance job search services to support the economic and social recovery. To address the negative impacts of the pandemic on education, the government is promoting adjustments in the sector such as advancing the establishment of digital learning platforms and providing additional school grants to support the re-opening of schools.
- 7. The government is proactively managing its unanticipated financing needs.** Revenue mobilization at the federal level is estimated to have declined by the equivalent of 0.5 percent of GDP in FY20, with domestic direct and indirect tax collection impacted by COVID-19. Preliminary data suggests despite the surge in healthcare spending in response to the pandemic, expenditure execution fell short from budgeted amounts. Overall, the federal government fiscal deficit is estimated to have widened from 2.5 percent of GDP in FY19 to 2.8 percent of GDP in FY20. The deficit is expected to further increase in FY21, to 3 percent of GDP, as the economic impacts of the crisis



continue to be felt. Meanwhile, the external financing gap has increased by an estimate of US\$ 1.8 billion with respect to pre-COVID-19 projections, to a total of about US\$ 5.2 billion in FY21. Expected financing sources include official transfers and prospective budget support (US\$ 2.3 billion, including IDA grants), IMF disbursements (US\$ 0.9 billion), proceeds from privatization and market liberalization measures (US\$ 1.1 billion), debt service reprofiling (US\$ 0.6 billion) and gains from the Debt Service Suspension Initiative (DSSI) (US\$ 0.2 billion). As part of its response to the financing challenges, the government has performance and policy actions to adopt a State-Owned-Enterprise Debt Resolution framework to facilitate debt repayments and minimize risks to macroeconomic instability and implementation of a new Excise Tax Proclamation in FY21 aims to mitigating the fall in revenue.

## II. World Bank Group Support for Responding to the Crisis

8. **The WBG's approach in Ethiopia has been adjusted to meet the challenges posed by COVID-19 while maintaining a longer-term strategy to sustain transformational structural reforms embedded in the Country Partnership Framework for Ethiopia for FY18-22 (CPF).** These adjustments have been made within the CPF's focus areas and objectives, particularly the second Focus Area of Building Resilience and Inclusiveness which includes objectives to improve safety nets, healthcare systems, basic education, water supply & sanitation, and management of natural resources which impacts livelihoods. Focus Area 1 also provided strategic underpinning for addressing COVID-19 impacts, particularly in improving access to finance and agricultural productivity. As a result, support is being provided across four pillars consistent with the overall World Bank Group approach: (a) Saving Lives, (b) Protecting Poor and Vulnerable People, (c) Ensuring Sustainable Business Growth and Job Creation, and (d) Strengthening Policies, Institutions and Investments. World Bank Group support has been primarily focused on the first two of the three expected stages of crisis response: *relief*—emergency assistance to confront the immediate threat to public health, as well as short-term economic, financial and social impacts; *restructuring*—strengthening health systems, restoring human capital, and pursuing economic reforms, debt resolution, and recapitalization of firms and financial institutions; and *resilient recovery*—exploiting new opportunities for more inclusive, resilient, and sustainable longer-term development.
9. **World Bank lending has been rapidly adjusted to support Ethiopia across several dimensions of its response to the pandemic.** Ethiopia was among the first countries to receive financing from the World Bank's COVID-19 rapid response facility, with a US\$82.6 million COVID-19 operation approved on April 2 2020, just weeks after the crisis became evident in the country. This operation is already two-thirds disbursed and has been critical in providing medical supplies; capacity building; information outreach; and supporting quarantine, isolation, and treatment centers. This was followed by the rapid preparation of a supplemental US\$ 250 million Development Policy Financing approved in June 2020 to augment an earlier US\$ 500 million approved in March 2020 to support the country's growth and competitiveness agenda. New social protection operations were fast-tracked and levels of financing were increased, with the US\$ 400 million Urban Productive Safety Net and Jobs Project (UPSNJP) approved in September and the US\$ 512.5 million Strengthening Ethiopia's Adaptive Safety Net Project (SEASN) approved in November. These operations build on preceding support for productive safety nets and support cash transfers, food aid, public works, self-employment through start-up grants, and labor market integration of youth. Employment and development in the agriculture and rural areas was pursued through US\$ 80 million in Additional Financing of the Second Agriculture Growth Project approved in September 2020 and a US\$165 million Additional Financing for the Ethiopia Resilient Landscapes and Livelihoods Project in December 2020, financed by the Green Climate Fund. These latter two operations had been previously planned but were accelerated and design was adjusted to meet COVID challenges. An US\$14.9 million COVID-19 Education Response project, financed by the Global Partnership for Education, was approved in August 2020 to complement the ongoing General Education



Quality Improvement Project. Finally, a new US\$ 100 million additional financing for the Women Entrepreneurship Development Project was rapidly prepared and approved in December 2020.

10. **The WB's lending pipeline in the latter half of FY21 similarly reflects changes to address COVID-19 impacts.** A second phase under the COVID-19 Emergency Response MPA is under preparation to support Ethiopia's anticipated rollout of vaccines in 2021. Support for small businesses and jobs creation is being fast-tracked through a previously unplanned US\$ 200 million Additional Financing for Small and Medium Enterprise Support Project, both of which are to be delivered in Q3 FY21. In addition, preparation of the US\$200 million Digital Foundations Project has been accelerated, recognizing the central role of connectivity to help overcome the human development and commercial impacts of COVID-19 restrictions. Similarly, preparation of the US\$500 million Access to Distributed Electricity and Lighting, central to improving connectivity, has been fast-tracked. Finally, a new US\$250 million additional financing for the Enhancing Shared Prosperity through Equitable Services Program for Results operation is planned to help sustain service delivery improvements at the local level. Development policy lending as well as an integrated agriculture and rural development program as well as support for the financial sector and human capital development are being planned for FY22.

#### Ethiopia World Bank program lending adjustments triggered by COVID-19 impacts

				COVID-19 Impacts Addressed			
Operations	Adjustment triggered by COVID-19 Impacts	Commitment amount, (US\$ millions)	Approval	Saving Lives	Protecting Poor and Vulnerable	Business Growth and Jobs	Strengthen Policies and Institutions
<i>Approved Since April 2020</i>							
COVID-19 Emergency Response (Health Services)	New (not planned prior to pandemic)	82.60	Apr-20	X			X
Supplemental DPF	New	250.00	Jun-20			X	X
COVID-19 Education Response Project	New	14.85	Aug-20		X		
Urban Productive Safety Net and Jobs Project	Fast-Tracked	400.00	Sep-20		X	X	X
Strengthen Ethiopia's Adaptive Safety Net	Fast-Tracked	512.50	Nov-20		X		X
AF Women's	New	100.00	Dec-20			X	



				COVID-19 Impacts Addressed			
Operations	Adjustment triggered by COVID-19 Impacts	Commitment amount, (US\$ millions)	Approval	Saving Lives	Protecting Poor and Vulnerable	Business Growth and Jobs	Strengthen Policies and Institutions
Entrepreneurship Development Project							
<i>Planned in remainder of FY21</i>							
AF Small and Medium Enterprises Finance Project	New	200.00	Q3 FY21			X	
Access to Distributed Electricity and Lighting	Fast-Tracked	500.00	Q3 FY21			X	X
Ethiopia Digital Foundations Project	Fast-Tracked	200.00	Q3 FY21			X	X
2nd phase, COVID-19 Emergency Response (prep for vaccination)	New	200.00	Q3 FY21	X			X
Additional Financing to GEQIP-E for Refugees Integration (Partially funded by Global Partnership for Education)	Design adjusted	122.50	Q3 FY21		X		
AF for the Enhancing Shared Prosperity through Equitable Services	New	250			X		X



- 11. Implementation of several ongoing operations has been adjusted to address COVID-19 impacts.** With respect to saving lives, the Ethiopia Health Millennium Development Goal Program-for-Results (PforR) operation is financing critical inputs to the national response, such as PPE for frontline health workers. Ongoing operations supporting the water sector (One WASH), the Second Urban Water Supply and Sanitation Project (restructured) and urban development have had implementation adjusted to focus more on addressing emergency water rehabilitation, providing access to WASH services in priority health institutions and quarantine centers and hygiene interventions to curb the potential spread of the virus. The rural and urban PSNPs temporarily waived the work requirements to allow for social distancing. Payments to beneficiaries were made in advance for three months instead of monthly payments, and protective gear was adjusted the needs of the pandemic. Hygiene measures, protective gear and intensive information accompanied the implementation of the safety net programs. Implementation support by the World Bank has been similarly constrained owing to distancing requirements. In addition to supporting connectivity for Bank staff in Ethiopia as well as key operational counterparts within the framework of projects, the Ethiopia program is accelerating the use of the Geo-Enabled Monitoring System and analogues in its operations, particularly in the transportation and agriculture sectors.
- 12. IFC's FY20-24 strategy for Ethiopia is incorporating responses to COVID-19 to protect livelihoods and minimize destruction of markets.** Prior to the onset of the COVID-19 pandemic, the strategy envisaged investment adjustments in FIG, MAS and infrastructure sectors for FY20-FY24. At present the economic and humanitarian impacts of the pandemic have pushed IFC's work in sectors to scale back investment services targets and increase advisory services in order to protect, and then support the subsequent recovery and creation of, new markets. In particular, based on the findings of IFC deep dive on two Ethiopian banks prior to the COVID-19 pandemic, risks associated with the Ethiopian financial sector were considered very high. With COVID-19, these risks have become even higher (for example, higher NPLs, increased liquidity crunch, higher impact on capital adequacy). Regarding MAS sectors, IFC is looking to provide working capital lines to firms with headroom to take on debt. In particular, the MAS team is supporting clients operating in the agribusiness sector to enter new regional export markets with the aim to increase diversification and minimize longer supply chain risk. The infrastructure sector, given the specific case of Ethiopia, private sector involvement is already limited so there is not much to protect/restructure as a result of the COVID-19 pandemic. As of June 2020, IFC's potential program size in Ethiopia stands at US\$ 285 million in Investments Services (base case) and US\$ 25.5 million in Advisory Services for the five-year period. In line with IFC's COVID-19 response framework, going forward the strategy will aim to reduce market destruction and subsequently restructure and create new opportunities in the tourism, agribusiness and health sectors.
- 13. Going forward, the unprecedented global nature of the COVID-19 crisis, coupled with Ethiopia's structural bottlenecks, hamper prospects for private sector engagement in key sectors.**
- *Financial Sector.* The COVID-19 fallout will likely exacerbate shortage of foreign exchange, in part due to reduced exports, remittances, and tourism receipts. In addition, given the financial sector's mounting vulnerabilities, the pandemic will likely result in a local currency liquidity crisis, putting additional strain on the private sector's limited access to finance. Lastly, financial institutions will likely require additional working capital to provide liquidity support to their SME clients.
  - *Agribusiness.* A prolonged COVID-19 outbreak in Ethiopia, including protracted containment measures and transport restrictions will impede farmers' access to markets and disrupt fresh food supply chains, thereby exacerbating food shortages created by the ongoing locust invasion. On the demand side, the closure of restaurants and street food outlets removes a key market for many producers and processors



that may result in a temporary glut or trigger upstream production cuts as shown in some countries in the meat and beverage (malt) sectors.

- *Manufacturing.* The COVID-19 crisis has adversely impacted the sector, as evidenced by a decline in investment inflows, disruption in supply chains, and a loss of revenue and jobs as a result of a contraction in global economic growth and demand.

**14. The WBG’s knowledge agenda has similarly been adjusted to support Ethiopia on evidence and analysis for dealing with the pandemic’s impacts.** The World Bank has supported several rounds of rapid phone surveys administered to firms (eight rounds) and households (seven rounds) between April and November 2020. The results of these surveys have been communicated with the Jobs Creation Commission. Online briefs highlighting the main findings in each round and special topic reports focusing on firm’s behavior during the pandemic, and gender effects and have been published on the website of the WBG. The findings have also been used to inform the response to COVID in WBG operations. A policy note synthesizing the survey findings to inform policies for enhancing household welfare recovery from the COVID crisis is planned for FY21 Q3. The World Bank’s regular biannual Ethiopia Economic Update (the 8<sup>th</sup> in the series) issued in the summer of 2020 assesses the macroeconomic and microeconomic impacts and policy responses to COVID-19. In addition, a Country Economic Memorandum is under preparation for completion in early FY22 and will try help identify additional reforms to support inclusive and sustainable growth going forward. Analytical work in HD sectors, particularly health, has been recalibrated to address the changed circumstances for service delivery.

**15. The WBG’s efforts are closely coordinated with other development partners.** The WB coordinated closely with the IMF as well as major bilateral partners of Ethiopia on financing support to cushion against the impacts of COVID-19 in the context of the Government’s robust policy response. This included the US\$250 million supplemental Development Policy Financing (following the approval in March 2020 of the previously prepared US\$500 million Second Growth and Competitiveness DPF) alongside the IMF’s approval in May of a Rapid Credit Facility of US\$410 million which supplemented its own three-year US\$ 2.9 billion program for Ethiopia. With respect to financing for health services to save lives, the Bank’s provision of US\$82.6 million complemented by support from the Global Fund, GAVI, the Jack Ma foundation and other bilateral and multilateral donors. The World Bank also place a central coordination role for managing financing for the productive safety nets programs. In particular, the rural safety nets program will be complemented by US\$190 million in financing in FY21 from eight other development partners (and US\$967 million over five years). The WB also plays a similar coordinating role for development partner funding for water and sanitation via the One WASH program and basic education through the General Education Quality Improvement Project. For One WASH the Bank mobilized additional grant funding from the Dutch Government and is in talks to mobilize additional resources from the Danish government for WASH interventions.