INCLUDE

KNOWLEDGE PLATFORM ON INCLUSIVE DEVELOPMENT POLICIES

COVID-19 policy responses and equity impact in Ethiopia

By **Kassa Teshager and Tesfaye Chofana**

Published November 2021

Authors
Kassa Teshager (PhD) is associate professor of Development Studies at the Ethiopian Civil Service University, Department of Development Economics, Addis Ababa, Ethiopia. kassa.teshager@ecsu.edu.et.

Tesfaye Chofana (PhD) is assistant professor of Agriculture and Natural Resource Economics at the Ethiopian Civil Service University, Department of Development Economics, Addis Ababa, Ethiopia. Tesfaye.Chofana@ecsu.edu.et.

Support
INCLUDE Secretariat

INCLUDE
KNOWLEDGE PLATFORM ON INCLUSIVE DEVELOPMENT POLICIES

Contents

Acronyms

AfDB	African Development Bank
BMO	business membership organization
CDC	Center for Disease Control
ETB	Ethiopian birr
EPHI	Ethiopian Public Health Institute
GDP	gross domestic product
ICU	intensive care unit
ILO	International Labour Organization
IMF	International Monetary Fund
KII	key informant interview
NBE	National Bank of Ethiopia
NGO	non-governmental organization
OECD	Organisation for Economic Co-operation and Development
PPE	personal protective equipment
RRMC	Regional Resource Mobilization Committee
SNNPR	Southern Nations, Nationalities, and Peoples' Region
US	United States
USAID	United States Agency for International Development
WHO	World Health Organization

Chapter 1. Background of the study

1.1 Introduction

Home to 115 million inhabitants and with average annual population growth of around 2.6% (2015–2020), Ethiopia is the second largest country in Africa (United Nations, 2019). Life expectancy at birth for Ethiopians has improved in recent years and was 63.7 years in 2019 (United Nations, 2019). The majority of the population reside in rural areas, with about 21% living in urban areas (Statista, 2020).

The economic performance of Ethiopia over the last decade was promising, at 9.25% between 2013 and 2019 (NBE, 2019), although this growth has lacked inclusiveness. The National Bank of Ethiopia (NBE) reported that rain-fed subsistence agriculture is the leading economic sector in terms of its contribution to gross domestic product (GDP). In 2010, agriculture accounted for 46.1% of GDP, followed by services (43.7%) and industry (10.2%). Since 2011, the service sector has taken the lead and, in 2019, the service sector's share of GDP was 40% and agriculture was 33% (NBE, 2019). However, the employment generated by agriculture is still the largest, at 72.7%, followed by the service sector (19.9%) and industry (7.4%) (Central Statistical Agency, 2016). These figures reflect the slow pace of sectorial transformation in Ethiopia. Despite the substantial contribution of agriculture to income and employment (over 79% of the population in Ethiopia work in the agriculture, FAO et al., 2019), it is vulnerable to the impact of climate change, which has resulted in persistent drought in Ethiopia in the past years (Deressa, 2007). Although the pandemic has affected all sectors in Ethiopia, it has impacted the least on agriculture (Degye et al., 2020), consistent with the lower levels of COVID-19 in rural areas.

The poverty reduction interventions by the government and donors have reduced poverty in Ethiopia, but the level of poverty still remains high. In 1999, 44.2% of the population were living below the national poverty line, dropping to 23.5% by 2015. However, the proportion of the population living on less than $5.5, $3.2 and $1.9 USD a day was 90.7%, 26.8% and 9.4%, respectively (World Bank, 2019). In addition, around one-fifth of the population are undernourished (20.6% between 2016 and 2018) (FAO et al., 2019). Child and maternal malnutrition is also high. In 2016, 38% of children below the age of 5 were stunted and 24% were underweight, with 22% of women aged 15–49 considered 'thin' with a body mass index (BMI) under 18.5 (Central Statistical Agency, 2016). Despite the fact that the agricultural sector is prone to drought and extreme whether events, farmers in Ethiopia do not have access to insurance for crop or livestock failure. As will be discussed later in this report, the COVID-19 pandemic is compounding these problems and some of the mitigation measures are expected to increase food shortages and poverty by increasing job losses and reducing production and efficiency.

The labour market in Ethiopia is biased against women and youth. According to the International Labour Organization (ILO), in 2020, total overall labour force participation by 15–64-year-olds was 79.6%. Disaggregated by sex, women's participation was 73.56%, while men's was 85.8% (ILO, 2020). Unemployment is also inequitable, with more women being unemployed than men (World Bank, 2019). Lockdown and social distancing measures to slow the spread of COVID-19 have exacerbated the existing high unemployment numbers. According to Degye et al. (2020), surveys conducted during the early stage the pandemic showed that job and income loss had increased in all economic sectors in Ethiopia, albeit the influence was unequal across economic activities, geographic locations and social groups.

The coronavirus pandemic has also posed a challenge for global health care systems (de Aranzabal et al., 2020), including the fragile health care systems in Africa. For example, the swift growth of the pandemic quickly filled emergency departments, intensive care units (ICU), and inpatient beds (de Aranzabal et al., 2020). In Africa, there are only 0.2 physicians per 1,000 people, compared to 3.7 and 2.6 per 1,000 people in Europe and North America, respectively. Unfortunately, within the first few months of the pandemic (by 23 July 2020), over 10,000 health care workers in African had been infected with COVID-19 (WHO, 2020b). In addition, In April 2020 WHO reported there were less than 2,000 ventilators in 41 countries in Africa and 5,000 concentrated care unit beds in 43 countries (WHO, cited in Wadvalla, 2020). This tilted distribution of ventilators has put extra pressure on the ill-equipped health facilities in Africa (Craig et al., 2020).

Ethiopia generally falls below the continental average for health care systems in Africa, with 0.8 midwives and nurses, 0.08 physicians and 0.3 hospital beds per 1,000 people in 2015. In 2017, according to the World Development Indicators, only 11.4% of people had access to potable water and only 4.2% of rural people had access to at least basic sanitation services (World Bank, 2019). Fortunately, despite the inadequate health care system in Africa, the spread of the pandemic in has been lower than in most Western countries. There are several possible reasons for this, namely: the pandemic occurred late in Africa, which give room for preparations to be made and lessons to be learnt from other countries; the low level of connectivity between Africa and the West, which meant less movement of people; the early lockdown measures and restrictions imposed; and Africa's experience of managing other epidemics (e.g., Ebola and cholera) in the past. In addition, temperature is thought to impact positively on respiratory viruses and genetic factors might also partly explain the low spread of the virus in Africa (although this needs further research). However, there has also been widespread under-reporting of cases, due to lack of resources and lack of awareness of the virus among the general public (de Aranzabal et al., 2020).

1.2 Research questions

COVID-19 does not discriminate on the basis of geography, economic status, ethnicity, religious belief, or political ideology. Considering this fact, the Government of Ethiopia has taken various measures to combat the spread of the virus, as well as alleviate the social and economic consequences of the measures, including declaring a State of Emergency and introducing various economic and social policies. Country specific and international studies of past pandemics have highlighted inequity in terms of the impact of the pandemic and the response to the pandemic, among different socioeconomic, cultural and other groups. Hence, the aim of this case study is to systematically analyse how Ethiopia's national and regional governments and other stakeholders have taken equity into account in their policy responses to the COVID-19 pandemic.

The main research question is: *To what extent have the policy responses measures to combat COVID-19 in Ethiopia taken equity into consideration?*

The specific research questions are:

- What have been the mitigation measures, policy responses, policy actions and interventions by national and regional governments and non-state actors (including by the diaspora) in Ethiopia in response to the COVID-19 pandemic?

- To what extent are these mitigation measures and policy responses inclusive in nature; how do they affect different socio-economic groups; and to what extent have they been geared towards structural change in Ethiopia?
- Where do the policy responses originate from? Which countries' experiences have the Ethiopian national and regional governments drawn upon in formulating these policies? How have sociocultural factors determined the response to the pandemic (choices, implementation, possibilities and limitations)?
- What has been, and is, the role of non-state actors (media, NGOs, pressure groups) in pressing for inclusion? What is the likelihood that these measures will be sustained or that certain measures to support marginalized groups will be withdrawn in the future?
- What innovations have been developed in response to the COVID-19 pandemic?
- What dilemmas are the government (national and regional) facing in light of the limited health resources in the country and in terms of the choice of total lockdown versus the importance of the economy and informal sector?
- What has been the effect of policy responses that have restricted mobility or the accessibility of education, water and healthcare, and who has been most affected?
- How are health workers and care givers supported and protected from health risks?

This case study is organized into five sections. The first chapter (Chapter 1), introduces the report and presents the research questions. This is followed by a literature review (Chapter 2), which discusses the concepts involved and policy responses to the pandemic taken by different countries. Chapter 3 is devoted to a discussion of the methodology, including the design and analysis techniques used in this study. Chapter 4 presents the results and discussion and Chapter 5 contains a summary of the findings, conclusions, and recommendations.

Chapter 2. Literature review

The literature review focused on the socioeconomic impacts of the COVID-19 pandemic globally and in Africa. It covered the impact of the pandemic (on employment, income, access to services and equity), as well as the policy responses adopted to control the spread of the virus and mitigate its impacts.

2.1 Global impact of COVID-19 pandemic

The global economy has been impacted by several epidemics in the past. For example, in 1921, influenza decreased US GDP by 6% (Barro et al., 2020). GDP loss measured as percentage of GDP in West Africa under high Ebola estimated to be US$ 25.2 billion in 2015 (World Bank, 2014). In China, severe acute respiratory syndrome (SARS) cost the global economy $54 billion and cut 1% from China's GDP (Peiris et al., 2003). The global macroeconomic the effect of lockdown measures to combat the current COVID-19 pandemic have been substantial. COVID-19 has hit European and US financial markets hard, and the health crisis as a result of the pandemic has led to financial crises in these economies (Shehzada et al., 2020). With 2 billion quarantines and hundreds of thousands of job lost, the 90% of the global economy has faced recession. About USD 8 billion dollars in aid has been required to offset losses during the shock (de Aranzabal et al., 2020). As of 16 September 2021,Worldometer estimated 240,862,350 global confirmed cases of COVID-19 and 4,905,245 deaths (Worldometer, 2021).

2.2 Impact of COVID-19 in Africa

The following sub-sections outline the various socioeconomic impacts of the pandemic in Africa.

2.2.1 Employment impacts

The African labour force is vulnerable to labour market challenges and the COVID-19 pandemic exacerbated this situation. The African Development Bank (AfDB) estimates that 24.6 to 30 million jobs were lost in the region due to COVID-19 in 2020 (ADB, 2020). A survey of five Sub-Saharan African countries (Kenya, Mozambique, Nigeria, South Africa and Côte d'Ivoire) found that 60% of those employed in these countries pre-CoVID-19 lost their jobs from January to March 2020 due to the pandemic (highest in Nigeria and Côte d'Ivoire and lowest in South Africa) (GeoPoll, 2020). A wave based survey in South Africa from 29 April to 6 May 2020 found that 60% were permanent employees during the lockdown and therefore retained their jobs: only 2% of those formally employed became jobless, and 5.2% closed their business. Although lockdowns did not affect the employment status of 89.5% employed people before the pandemic in South Africa, 21.3% of those employed reported a drop in income (Carlitz and Makhura, 2020). In Nigeria, the lockdowns decreased non-farm activities by 11% and had smaller impacts on farming and wage-related employment (Amare et al., 2020). The permanent impacts of the pandemic have been higher in the informal sector (GeoPoll, 2020).

2.2.2 Impact on income

Similar to its impact on employment, COVID-19 has changed people's income and affected economic growth in Africa, reversing previous gains in economic development (Cilliers et al., 2020). The AfDB

reported a recession in Africa with an overall drop in GDP ranging from 1.7% to 3.4% in 2020. The forecast for the African economy in 2030 is US $349 billion with COVID-19, compared to US $643 billion without the crisis. Per capita GDP is expected to be restored to 2019 levels only by 2024, in the best situation, and by 2030, in the worst situation (ADB, 2020). In a study conducted in Kenya, Mozambique, Nigeria, South Africa and Côte d'Ivoire, 49% said that their income had dropped since the pandemic, while only 5% reported that their income increased. In terms of sector, 39% of government and 38% of health workers said that their income did not drop, but 63% of formal workers, 88% of informal workers, and 74% of transportation workers reported that their income did drop. Overall, 82% reported a drop in income since the pandemic started, with Côte d'Ivoire recording the highest drop (GeoPoll, 2020).

Lockdowns also hindered the cultivation of food crops, thereby reducing food production and food security (Ejeromedoghene et al., 2020; Sers and Mughal, 2020). It also affected the transportation of food and other goods in the East Africa region in May and April 2020 and increased the exposure of households in Nigeria to food insecurity (Elsahoryi et al., 2020, Udmale et al., 2020, Amare et al., 2020). In Uganda and Kenya, after the lockdowns, two-thirds reported an increase in income shocks (an increase of 44%) and food insecurity (of 38%) and a decrease in fruit consumption (by 30%) (Kansiime et al., 2021). Lockdown measures also significantly increased hunger in South Africa (Carlitz and Makhura, 2020). In Nigeria, food insecurity was higher for households in areas with a greater number of COVID-19 cases and that were subject to mobility lockdowns, and the pandemic also increased food prices (Amare et al., 2020). In Africa, 14 million people are expected to be pushed into extreme poverty post-pandemic. The pandemic has also reduced government revenue in the region, which will cause cut backs to health services, and these cut backs and hunger could lead to more deaths than those caused by COVID-19 (Cilliers et al., 2020).

2.2.3 Impact on access to services

The pandemic has affected access to basic services, such as water, energy and education, due to lockdown measures and other restrictions. At the same time there has been increased demand for services such as water. For example, the call for 'safe hands' by WHO increased the demand for water in Zimbabwe from four to nine litres per day (Zvobgo and Do, 2020). In Mombasa, Kenya, the pandemic has resulted in insufficient electricity, housing and health services (Kithiia et al., 2020). A recent survey found that in 25 African countries (except for South Africa), 46% of households do not have access to water in their houses and experience problems with sanitation and food storage; only 8% had access to all three of these important things (Ekumah et al., 2020). Even in countries with a small population, like Liberia, 90% did not have access to hand washing facilities in 2007, and 416 million people on the African continent do not have access to potable drinking water (Okoi and Bwawa, 2020). In Ethiopia, the pandemic has affected access to medical treatment unequally (Kaleab, 2020) and in a recent survey 13% of households reported being unable to buy enough medicine (Degye et al., 2020).

2.2.4 Impact on equity

The pandemic has had heterogeneous impacts on different sectors of the economy, geographic locations and social groups (Kansiime et al., 2021; Amare et al., 2020; GeoPoll, 2020; Carlitz and Makhura, 2020; Couch et al., 2020; Kim et al., 2021; Lebrasseur et al., 2020). The rich are more likely to be educated and are generally healthier in Africa. They are also better positioned to adopt preventative measures (such as social distancing and hand washing) and to deal with economic shocks, and so are less vulnerable to the pandemic and the measures taken in response to it than the poor (Ferreira and Walton, 2005). In South Africa, the pandemic has also affected women's jobs more than men's, increased violence against women,

and had other gendered impacts (GeoPoll, 2020; Casale and Posel, 2020; Mbunge, 2020). In Nigeria, lockdowns have reduced food security more for the poor, non-farm business households, those with school-aged children, and households in conflict-affected areas (Amare et al., 2020).

Even after lockdowns were lifted, the lowest income brackets are more likely to be unable to find work, than the next income bracket in Kenya, Nigeria and South Africa, and the lockdowns excessively affected lower income households in South Africa (Köhler and Bhorat, 2020; GeoPoll, 2020). In Kenya and Uganda, research has shown that income poor households and households dependent on labour income are more vulnerable to income shocks, while farmers are less vulnerable (Köhler and Bhorat, 2020). The pandemic has increased poverty levels and resulted in a drop in the earnings of informal workers, although the impact of the pandemic differs among income groups and is most pronounced in lower-middle income economies (Monitor, 2020). The impact of the pandemic on agricultural income has been less than non-farm income, and varied across sectors, regions and places of residence in Ethiopia (Degye et al., 2020).

2.3 Policy responses to COVID 19

COVID-19 was declared a worldwide pandemic by the World Health Organization (WHO) on 11 March 2020 (Osseni, 2020). Since then, different mitigation measures and policy responses have been put in place by different countries around the world. Capano et al. (2020) identified 13 health-related policy measures in response to COVID-19 and the Organisation for Economic Co-operation and Development (OECD) identified 18 policy tools implemented in different countries (OECD, 2020a). For this study, the policy measures are group into three categories: public health and social measures; economic measures; and governance and lockdown measures.

2.3.1. Public health and social measures

Public health measures (e.g., awareness creation, hygiene and sanitation, case management) and social measures (e.g., physical distancing, public service closures, limiting public gatherings, school closures, travel restrictions) are ways to reduce or stop the spread of COVID-19 (Nicola et al., 2020; Goshu et al., 2020). Wang and Wang (2020) point out that, despite the existence of vaccines and treatments for COVID-19, public health and social measures play an essential role in reducing the spread of COVID-19 and saving lives.

Maintaining social distance has been used effectively in Chain and Korea to prevent the spread of the disease, as it limits human interaction, thereby stopping transmission (Adhikari et al., 2020; Anderson et al., 2020; Sjödin et al., 2020; Gudi and Tiwari, 2020; Watkins, 2020). This measure is the most effective and can be implemented by introducing flexible work arrangements and distance learning, closing non-essential services, restricting movement (local or national), and introducing stay at home measures, in conjunction with individual protective measures such as frequent hand washing and use of face masks (Pang et al., 2020; Güner et al., 2020; Wilder-Smith and Freedman, 2020). A modelling study in China has predicted that if social distancing measures were applied one week, two weeks and three weeks earlier than implemented in China, it could have reduced the number of new cases by 66%, 86% and 95%, respectively (Gudi and Tiwari, 2020). Another modelling study in the United States (US) also predicted that if the country had provided social distancing guideline a week or two weeks earlier, it could have reduced deaths by 60% and 90%, respectively (Salzberger et al., 2020).

Public awareness creation is among the most effective public health measures for reducing the spread of COVID-19. This includes disseminating up-to-date information, and countering misinformation, about the nature of COVID-19, its symptoms, precautionary measures, and diagnosis and treatment. Evidence shows that in the early days of COVID-19, there was a lack of public awareness and people resisted social distancing and the use of masks (Modi et al., 2020). In some countries, there was misinformation, for example, some believed that alcohol could treat COVID-19 (Iranpour et al., 2020) or that eating garlic or mint could cure the virus (Egunjobi, 2020). A recent study found that there is a strong correlation between the number of COVID-19 cases and the amount of myths and misinformation (Hu et al., 2020). Although the information on the virus has changed over time to time, it is important that information and advice remain accurate, reliable and consistent, and that information is disseminated to the public through verified sources. It is also vital that any misinformation be handled efficiently to prevent misunderstandings. As a result, a number of reliable sources, including WHO and various United Nations' agencies, have been working with governments to provide up-to-date information on COVID-19 (WHO, 2020c).

Some scholars argue that all these public health measures should be balanced with adaptive social, economic and governance measures (Mayr et al., 2020: Wu and McGoogan, 2020). Coordinated reorganization of health and social services is essential to assess and test persons rapidly, treat patients effectively, and protect hospitals and health personnel (Wang et al., 2020). Practising good hygiene measures in hospitals, schools and other public places could drastically reduce the spread of COVID-19, eliminating new cases (Watkins, 2020). WHO has also recommended that public health and social policy measures follow four levels of COVID-19 transmission: ‘no cases reported’, ‘sporadic cases’, ‘clusters of cases (grouped in place and time)’, and ‘community transmission’ (WHO, 2020a). Scholars recommend that to be effective public health and social measures must be implemented with the full cooperation and engagement of individuals, institutions, groups and society at large.

2.3.2. Economic policy measures

Most of the policy options proposed by scholars based on the OECD database and CoronaNet data are economic in nature (Capano et al., 2020, OECD, 2020b). Various policies have been introduced to offset the economic damage caused by the pandemic by reallocating budget funds to support businesses through new loans and changes to lending conditions and by injecting liquidity into the economy. Although emphasis has been placed on public health and social measures, African countries have been taking various economic measures to help their citizens and sustain their economies. These economic policy measures include tax exemptions, fiscal stimulus, liquidity injections, interest rate reductions, loan rescheduling, and direct support for vulnerable people (Masbah and Jacobs, 2020). African countries have received both material and financial aid from the World Bank, International Monetary Fund (IMF), United States Agency for International Development (USAID), United Nations, China, philanthropists, and other donors, in the form of short, medium and long-term support to help detect, prevent, and respond to the COVID-19 pandemic (Ezeh et al., 2020; Masbah and Jacobs, 2020; Loembé et al., 2020) (Table A1(a), see annex).

2.3.3 Governance and lockdown measures

International experiences show that the role of effective and inclusive governance is significant in fighting the spread of COVID-19 and determining the relationship between the state and the people (Lytras and Tsiodras, 2020). During the pandemic, governments across the world have implemented various measures including declaring states of emergency and full or partial lockdowns. Lockdowns have hindered access to

health care (Caruso et al., 2020) and given rise to mental and physical health issues due to isolation and inactivity, and school closures have impacted negatively on children (Colao et al., 2020; Yoshikawa et al., 2020). The economic damage caused by lockdowns also has a negative impact on public health, especially through increased unemployment and inequality. The Africa Center for Disease Control (Africa CDC) and WHO are working closely with member states to scale up diagnostic testing for COVID-19 (Nkengasong and Mankoula, 2020). The Public Health Institute, as part of the Africa CDC, has led diagnostic testing and training for health workers and public information management for government officials.

Chapter 3. Research methodology

This case study covers nine regions and two administrative cites in Ethiopia. This chapter describes the design and analysis techniques used.

3.1. Data collection

Both quantitative and qualitative data were collected from primary and secondary sources using a mixed method design. The primary data was collected from federal and regional institutions in key informant interviews (KIIs). Both women and men participated in the interviews (4 women and 20 men) from a total of 24 institutions at the federal and regional levels. The institutions considered in the interviews were the Ethiopian Public Health Institute (EPHI), Ministry of Health, Ministry of Education, Ministry of Water and Energy, Ministry of Labor and Social Affairs, Ministry of Technology and Innovation, Ministry of Women, Children and Youth, Central Statistical Agency of Ethiopia, Ministry of Finance, the Prime Minister's Office, the National Planning Commission, Ministry of Science and Higher Education, two hospitals in Addis Ababa targeting COVID-19, eight regional health bureaus, and two city administrations (in Addis Ababa and Dire Dawa).

In Ethiopia, the federal and regional levels of government have direct and indirect contact with local governments, including the decentralized *kebele* administration (ward). A *kebele* is the smallest administrative unit in Ethiopia and is close to the local community; hence, it is well positioned to identify vulnerable social groups as well as manage the distribution of resources to those in need. The *kebele* leaders can provide up-to-date information to government leaders at the federal and regional levels for decision making. Federal government leaders used the decentralized local administration to implement COVID-19 policy responses and manage the equity impacts of these responses. Almost all regions and major federal institutions were interviewed for this study, except in the Tigray region, as the current civil unrest made access impossible. Guiding interview questions were developed to shed light on the research questions and the interviews were carried out using Zoom, telephone, or face-to-face. The interviewees were asked about the policy measures implemented, the equity impacts and the inclusiveness of these policies, the role of state and non-state actors, and the experiences adopted in crafting the policies, as well as the challenges and opportunities presented by the pandemic. The responses were recorded in local language and translated into English.

Secondary data from the World Bank (2020) phone survey, which has been carried out since the start of the pandemic in all nine regions and two administrative cities in Ethiopia, was used. This case study draws on the first three rounds of the survey: round one was conducted from 22 April to 13 May 2020 and covered 3,249 people; round two was from 14 May to 3 June 2020 and covered 3,107 people; and round three was from 4 to 26 June 2020 and covered 3,058 people. This survey is the main source of information used in this study to examine the equity impacts of the measures employed to control the spread of the virus. The equity impacts of the responses on social services (e.g., access to education and health services) and income (e.g., agricultural, wage employment and food security) were ascertained by disaggregating the data from the survey by gender, income status and location (e.g., urban-rural and the nine regions). For the purpose of this study, equity is defined as the quality of being fair and impartial in policy responses to cope with the pandemic, in providing access to social services, and in providing economic support to the various economic sectors and social groups, particularly to vulnerable groups (Braveman, 2004). Percentages were computed to capture any differences in equity in terms of access to

education and health services, income losses in agricultural and wage employment, and food insecurity levels by gender, income status and location. Secondary data on COVID-19 was also collected from federal and regional government reports, the reports of international organizations such as WHO, John Hopkins University, and the Africa CDC. National and local policies, rules and regulations and other published and unpublished sources were also reviewed with a focus on equity.

3.2 Data analysis

The primary qualitative data was first transcribed, manually coded and analysed. Both secondary and primary data were analysed using descriptive statistics and thematic analysis techniques. The World Bank data was analysed using Stata Software and described using graphs and percentages.

Chapter 4. Results and discussion

The first part of this chapter presents policy responses and mitigation measures to the COVID-19 pandemic in Ethiopia. The second section covers the equity impacts and inclusiveness of the policy responses. The final section discusses the challenges and opportunities presented by the pandemic.

4.1 Policy responses to COVID-19 in Ethiopia

Ethiopia has taken swift and bold measures in response to COVID-19. Despite severe economic constraints, the results so far have been better than expected. Key informants from the federal and regional levels of the health sector advised that Ethiopia prepared its response plan in advance and has benefited from this preparedness. Lia Taddesse, the Minister for Health in Ethiopia, explained that the COVID-19 policy interventions are based on three foundations: *solidarity*, which refers to collaboration among stakeholders; *agility*, which includes the coordination of resource mobilization, public health interventions and partnerships; and *continuity*, which refers to the balancing of trade-offs in resources allocated to prevent transmission of the virus by ensuring the continued provision of essential health services and economic activities (Taddesse, 2020). The government response is constantly evolving and is perhaps unconventional in its approach, as many of the interviewees point out. This approach can be categorized into three broad categories: public health and social measures, economic policy measures, and governance and lockdown measures (Table A3, see annex).

4.1.1 Public health and social measures

Public health and social measures contribute to breaking the chain of transmission of coronavirus and prevent associated illness and death. In response to COVID-19, the Ethiopian government has implemented various public health and social measures, including awareness raising campaigns, personal hygiene and sanitation interventions, case management (contact tracing, quarantine, isolation, and treatment), social and physical distancing measures, education measures, and social protection measures (Table A2, see annex).

Awareness creation

Public awareness creation has been central to the Ethiopian government's approach to managing the pandemic. As the country's health sector strategy focuses on prevention via primary health care, creating public awareness about the nature of COVID-19, its symptoms, mode of transmission, and treatment is crucial. Several stakeholders have been involved in awareness creation and various policy measures have been implemented through different modalities. The KIIs revealed that the daily provision of information by the Ministry of Health and regular announcements by the Prime Minister were among the ways of disseminating information to the public and raising public awareness. The media was also involved in disseminating precautionary messages about washing hands with soap, using sanitizer and masks, and the importance of social distancing (including compulsory mobile phone ring tones). National community mobilization, house-to-house screening campaigns, and the 'Mask Ethiopia' campaign were successful in creating awareness about COVID-19. Lia Taddesse, the Minister of Health, in her public briefing session, said "Let's all play our part to raise public awareness on how individuals play a crucial role in preventing COVID-19 for themselves, their families and their community" (Taddesse, 2020). The active involvement of religious institutions, artists, and youth had provided entry points to increase public awareness in mitigating COVID-19.

Goshu et al. (2020) assessed the level of public awareness of COVID-19 mitigation measures in Ethiopia, confirming that knowledge about the pandemic has been created in both rural and urban areas of the country. The eight transmission prevention measures (avoiding travel, crowds and gatherings, avoiding touching the face, social distancing, avoiding handshakes and physical greetings, and hand washing) were known by over 83% of rural and 95% of urban households. In addition, over 61% of rural people and 77% of urban people were aware that masks and gloves were useful mitigation measures (World Bank, 2020).

Hygiene and sanitation

One of the most feasible and important prevention measures that can be taken by individuals is proper hand washing and personal hygiene. The overall aim is to limit person-to-person transmission of the virus, protect individuals and their contacts, and reduce the contamination of frequently touched surfaces. All of the interviewees who participated in the KIIs and organizational reports reviewed for this study mentioned personal measures such as frequent hand hygiene (washing hands with soup and use of sanitizer), physical distancing, respiratory etiquette, use of masks if ill or attending to someone who is ill, and environmental cleaning and disinfection at home. The support of these measures by health institutions was significant. According to the World Bank (2020) survey, regardless of location or income status, over 99% of household heads in Ethiopia reported washing hands with soap more often, 96% abstained from shaking hands, and 86% said they had avoided crowds and gatherings since the pandemic began.

Case management: tracing, quarantine, isolation and treatment

In Ethiopia, detecting and isolating cases of COVID-19 is considered an effective prevention strategy. The health facilities are the main body involved in identifying cases. Individuals who visit a health facility with symptoms of cough, shortness of breath, fever, chills, muscle pain, sore throat, or new loss of taste and smell are tested for COVID-19. At the beginning, testing was a big challenge, due to limited access to testing facilities. The first case was confirmed by sending the specimen to South Africa. However, since then, access to testing facilities has increased significantly (with the help of WHO, the Africa CDC, and the Jack Ma Foundation) and over 60 testing centres are now functioning in Ethiopia. There are also sufficient quarantine and treatment centres. The collection of samples from suspects and contacts, as well as the transporting and testing of samples, all follow the standard techniques recommended by WHO for COVID-19. Rigorous contact tracing, isolation, compulsory quarantine, and treatment procedures and facilities have been established. If an individual has had contact with a COVID-19 positive person, they are quarantined for 14 days, and international travellers are required to undergo a mandatory 14-day quarantine on arrival. In addition, the country has assigned one hospital, the Eka Kotebe Hospital in Addis Ababa, for the isolation and treatment of COVID-19 cases. Health facilities are grouped into three tracks for the treatment of COVID-19: Track one is health facilities that provide services for COVID-19 patients only; track two is health facilities that provide COVID-19 and essential care services, as they have greater infrastructure and capacity; and track three is health facilities that are assigned for essential health care services only. Thousands of healthcare providers have received training on COVID-19 case investigation, contact tracing, laboratory diagnosis, clinical care and treatment.

The Ministry of Health has developed several national COVID-19 implementation guidelines and protocols. Public and private health facilities have been identified and prepared in all nine regional states and two city administrations studied. Quarantine centres have been set up in hotels, colleges, and universities (over 40 universities). Some public university dormitories have been converted to quarantine centres, increasing capacity to over 50,000 beds. A hall in Addis Ababa, the Millennium Hall, has been converted into a

temporary hospital, with 1,040 beds for coronavirus patients, out of which 40 are ICUs. This hall started receiving patients on 2 June 2020. In addition, the Youth Sports Academy is prepared to receive 300 patients. Identification, testing, and isolation, as well as care and contact tracing, have been performed as per the comprehensive national handbook prepared by the Ministry of Health (MoH, 2020) with different consultant bodies. However, the laboratory testing capacity in Ethiopia needs to be strengthened, as different laboratory tests are needed to follow up and discharge patients. There are also a number of isolation centres that have no COVID-19 testing capacity, but have been referring samples to other sites, which delays case detection.

Social distancing

Under the State of Emergency (Proclamation No 3/320), the Ethiopian government is enforcing social distancing, encouraging people to stay two metres away apart at all times. However, the findings highlight several barriers to social distancing measures. For example, the limited number of rooms, especially bedrooms, in most households makes it difficult to maintain distance and self-isolate. Limited access to electricity also restricts access to COVID-19 prevention messages disseminated via phone messages and radio and poor Internet connectivity discourages working from home. Lack of connectivity may widen inequalities between children who are able to attend online school and those who are not (Masters et al., 2020).

Education measures

Three days after the first confirmed case of COVID-19 in Ethiopia on 13 March 2020, the government officially announced the closure of schools (kindergarten to higher education). The Ministry of Science and Higher Education quickly shifted its focus to virtual learning platforms (VLPs). The Ministry of Education also developed a concept note for an education sector COVID-19 preparedness and response plan on 3 April 2020. The objective of the response plan was to ensure the continuity of learning at all levels while schools were closed, including through the use of digital technology such as e-learning for secondary education and multi-media channels (radio, television, and messaging platforms like Telegram) for primary schools. It was, however, evident that online learning was constrained by Internet connectivity, access to electricity, skills in the use of technology, and the availability of devices (computers, radios, TVs, laptops, and mobile phones). In addition, the monitoring of online learning and the poor quality of education in Ethiopia generally pose additional challenges. Most private schools in urban localities found temporary solutions to continue distance education by uploading reading materials and assignments using Google meet, Telegram, e-mail and social media platforms, often with parents assisting their children.

Social protection measures

Social protection measure are aimed at protecting marginalized and vulnerable groups, such as the elderly, migrants, refugees, homeless children, people with disabilities, and people living in poverty. During the pandemic, the Ministry of Labour and Social Affairs provided transitory shelters for urban street children, in partnership with private donors. The Ministry of Health, Ministry of Labour and Social Affairs, and donors first identified the vulnerable groups based on their age, gender, socio-economic status and marginalization, and then designated some areas, medical care and food for these groups (e.g., mentally ill people, the elderly and people living in poverty), who were identified through surveys in some areas, according to the interviewees.

The annual report of the Ministry of Labour and Social Affairs (MOLSA, 2020) and the data from the KIIs show that the Ministry targeted vulnerable people (e.g., elderly people, people with disabilities, children,

women and people living on the streets) and provided support and paid work for 45,000 vulnerable people; out of these, 24,003 have been reunited with their families. Approximately 21,136 Ethiopians who returned from various countries due to the pandemic were provided with support by the Ministry of Labour and Social Affairs and returned to their places or origin. The Ministry also provided food, sanitation or counselling to 743,949 vulnerable people (e.g., the elderly, people with disabilities, homeless people, and prostitutes) across the country. Moreover, direct support was provided to 1,285,134 beneficiaries of the urban and rural productive safety net programme in the form of a three-month advance payment. The Ministry, in collaboration with the Ethiopian Federation of National Associations of Persons with Disabilities, mobilized 17 million Ethiopian birr (ETB)[1] from development partners and provided food and sanitation assistance to 5,000 people with disabilities in the states.

Ethiopia has the largest social protection programme on the continent – the Productive Safety Net Programme – with over 8 million beneficiaries. Due to the pandemic, the public works requirement of the programme was waived and, thus, all beneficiaries are receiving unconditional transfers. At the beginning of the pandemic, beneficiaries also received a three-month payment in advance. Besides the Productive Safety Net Programme, several smaller scale initiatives, such as food banks, have been launched to support the vulnerable (Abate et al., 2020).

Economic policy responses

The Government of Ethiopia has launched various economic measures including tax exemptions, the cancelation of tax debts and property tax, employment tax reductions, injecting liquidity into private and government banks, loan rescheduling and providing additional loans to businesses, as well as various stimulus packages and employment measures (Table A1(a) and (b), see annex).

Tax measures

The cancelation of tax debts was among the tax measures introduced to sustain livelihoods and businesses during the pandemic. The tax debts owed (due to audit findings between 2004/5- 2014/5 were cancelled. For debts between 2015/16-2018/19 interest rates and penalties were cancelled, but firms were required to pay back their debt obligations within a year. If a firm paid their debt in full (not by instalments), it was entitled to a reduction of 10% of the total owed. In addition to this, the regional governments cancelled employment tax in their jurisdictions for four months, due to the pandemic.

Liquidity injection

This economic stimulus policy aimed to help businesses that were struggling to repay their loans. Under this policy, the central bank injected 15 billion ETB (or 0.45% of GDP) into private banks to allow the banks to reschedule debt repayments and reduce interest for borrowers without incurring a loss. The government also provided an additional 33 billion ETB to the Commercial Bank of Ethiopia and 1.5 billion ETB to farmers' cooperatives to maintain the supply chain soon after the start of the pandemic (Goshu et al., 2020). The Development Bank of Ethiopia established a special window to quickly dispense loans to micro and small-scale enterprises (MSES) and the National Bank of Ethiopia provided additional funds to microfinance institutions so that they could make them available to borrowers.

[1] One USD was equivalent of 39 ETB on average between March 2020 to July 2021.

Stimulus packages

In addition to injecting liquidity into public and private banks, microfinance institutions and farmers' cooperatives, some other sectors were also supported by the government. For instance, Ethiopian Airlines had to implement new cost-cutting measures to secure its cash flow and revised its strategy from growth to survival. To compensate for the reduction in passenger revenue, freight capacity has been doubled by improving productivity and repurposing 25 passenger aircrafts to cargo. The government also introduced a support package including a logistics subsidy targeting export goods including free rail to encourage the sale of exportable items on local markets and reduced dry-dock and air freight charges. Moreover, in a new initiative, factories and industrial parks have been directed to manufacture personal protective equipment (PPE) for local and export markets, with the aim of stopping such firms from closing or laying off workers.

Employment measures

The government also introduced a measure forbidding public and private companies from laying off workers during the State of Emergency. The Ethiopian tripartite constituents (labour confederations, employers, and the government) signed an agreement called the COVID-19 workplace response protocol on measures to be taken to counter the anticipated challenges of the pandemic for the economy and labour relations. The protocol of the Ministry of Labour and Social Affairs is consistent with the ILO guidelines on crisis response and the management of natural and manmade disasters. According to the protocol, the Ministry monitors private employers and public enterprises and, since the pandemic started, has handled petitions from workers from 366 organizations regarding lay-offs, denial of wages and pay cuts, and reinstated 12,004 workers.

Resource mobilization

The interviewees explained that the Government of Ethiopia has mobilized material and financial resources to fight the pandemic. The government, in collaboration with donors, has allocated US $5 billion to COVID-19 interventions. The government has also established the COVID-19 National Resource Mobilization Committee and the National Sovereign Fund and mobilized various resources in cash and in kind. These fund are to be deployed in times of crisis and acute emergency situations, including to treat COVID-19 patients and buy medical equipment, protective equipment and hygiene kits. Moreover, 1.5 billion ETB and various materials have been provided by the federal government to the regions to fight the pandemic.

Two main resource mobilization campaigns have been implemented by the federal government and the Addis Ababa city administration. The first one is 'Sharing Food with Others' and second one is 'Our Health is in Our Hands'. The second initiative was used to support 1.2 million people vulnerable to COVID-19 in Addis Ababa by contributing US $1.6 million. Key informants revealed that these initiatives were effective and created solidarity among citizens.

Maintaining key commodity supply chain

One of the measures that made the Ethiopian approach unconventional was the attention given to the transportation of food commodities. The Ministry of Transport decided to identify critical commodities and ensure uninterrupted agricultural commodity exchanges, farmer-to-farmer exchanges, primary (farm gate), secondary, and tertiary agricultural commodity aggregation, and distribution systems. Efforts have been made to put in place measures that will ensure the uninterrupted supply of chemical fertilizers, improved seeds, pesticides, herbicides and livestock medicine (Table A1(b), see annex).

4.1.2 Governance and lockdown measures

The political leadership has implemented important interventions to reduce the spread of COVID-19, including relating to coordination and leadership, making important decisions regarding declaring a state of emergency, lockdown measures and postponing elections.

Leadership and coordination

A national taskforce was established by the federal government to lead and coordinate the response from the federal to the local level. The Prime Minister led this taskforce, while heads of state led the regional taskforces. At each layer of the government, the taskforces had several sub-committees. According to the interviewees, these taskforces were effective in coordinating resource mobilization and activities.

At the sector level, there is a technical team led by the Ministry of Health and the EPHI. In addition, technical committees – such as the Strategic Leadership Team, the COVID-19 Task Force, and the Emergency Operation Centre – have been established and are coordinated at all levels. A third structure is the Regional Emergency Operation Centre. Coordination among government agencies at all levels has been much more effective during the pandemic than in the past. Consultations and dialogue with the private sector, development partners and faith leaders, as well as political parties, have been stepped up during the pandemic. The health sector has also been active in setting up an Expert Advisory Council with sub-committees. The Ministry of Health is responsible for reviewing the situation overall, as well as implementing timely measures and consulting with experts (at home and abroad), taking into account the experiences of other countries and the advice of international organizations.

State of emergency

The government declared a five-month State of Emergency (Proc. 3/2020) on 8 April 2020 and an executive taskforce was established and implementation guidelines developed to fully implement it. The State of Emergency provides the federal government with sweeping powers to curb individual rights in favour of public health and security. The State of Emergency transfers the ultimate government decision-making power to the Cabinet. Regulation 466/2020 prohibits meetings for religious, government, social, or political purposes in places of worship, public institutions, hotels, meeting halls or any other place. The regulation also prohibits regional or federal officials from giving statements to members of the press about COVID-19, without first obtaining permission from the federal committee or from the sub-committees at the regional level. However, exceptions are made in relation to professional commentary on COVID-19 laws, professional medical explanations, and the daily press briefings by the Ministry of Health. The regulation also prohibits disseminating information about COVID-19 and related issues that would cause “terror and undue distress among the public”. The regulation requires public communication professionals and media outlets to ensure that information, analysis, or programmes on COVID-19 are “without exaggeration, appropriate and not prone to cause panic and terror among the public” (Government of Ethiopia, 2020).

The key informants who participated in this study said that the State of Emergency has led to some improvements in the use of masks, physical distancing and hand hygiene practices, especially in Addis Ababa. It has also contributed significantly to a reduction in the use of transport, the closure of dance club, halls and bars, the cancellation of sporting events, and the partial disruption of religious festivals. In addition to this national State of Emergency, the Regional Council in Tigray also declared a State of Emergency on account of the coronavirus on 26 March 2020, prohibiting travel within the state and banning large gatherings.

Lockdown measures

Unlike some countries in the region, Ethiopia never went into full lockdown, severely restricted movement, or fully closed its borders. Ethiopia's approach was unconventional and consisted of partial lockdowns with selective restrictions. Movement between regional states was allowed and humanitarian organizations and cargo operators were permitted to operate without restrictions. The government strategy was 'sustained, moderate to strong measures' and focused on taking bold measures early and scaling them up gradually. However, as part of the State of Emergency, the Ethiopian government did close all schools and most borders (except the international border with Djibouti), and suspended public gatherings.

Postponement of election

The government postponed the national election, which was scheduled to take place in August 2020, to May 2021. The decision to postpone the election was made by the House of Federation and the parliament, following extensive research and consultations with experts, to reduce the spread of the pandemic.

4.2 The role of non-state actors in COVID-19 interventions

The role of non-state actors – such as the private sector, membership organizations, non-governmental organizations and international organizations – in Ethiopia's COVID-19 response was significant and as diverse as the sectors and regions of the country in its form, scope and reach. The role of non-state actors is discussed below.

Private sector

The Ethiopian private sector remains adaptive in its response to the crisis. However, the engagement of the private sector goes beyond corporate social responsibility (CIPE, 2020). Following the government's request to contribute to the National COVID Response Fund, the private sector contributed in cash and kind to control the spread of the virus. Some of the private sector contributions are given in Table A4 (see annex).

Some private businesses have also contributed in shifting their production line to COVID-19 materials and equipment, following the request of the Ministry of Health, to meet the demand for certain products, such as hand sanitizers, face masks, PPE, and other goods. In addition, enterprises like hotels and banks promoted and deployed online services, working from home, the use of masks in the workplace by employees and customers, working in shifts to reduce contact, reducing the number of customers being served at one time, and washing hands at the entrance (Table A5, see annex).

With the disruption of the global value chain and slowdown in international trade, many companies have partially closed their facilities. Some enterprises have taken the ultimate decision to close their doors, sending staff on paid leave for an indefinite period of time. Others have been forced to close permanently.

Business membership organizations

As aggregators of private sector interests and key agencies of advocacy, business membership organizations (BMOs) play an important role in the fight against COVID-19. Business chambers and

associations are taking on a variety of roles in this regard. For more details of the roles of BMOs since the pandemic see Table A6 (annex).

Non-governmental organizations

Many international and local NGOs have been involved in COVID-19 policy interventions in various ways. For example, HOPE, a US-based NGO, provided over 56,000 protective masks to Ethiopia and virtual training for health care workers on COVID-19. Another NGO closely working with the Ministry of Education on COVID-19 interventions is Lifebox. This NGO has made two innovative contributions to Ethiopia. The first is the N95 mask, decontaminating and reusing masks and medical equipment maintenance (Starr et al., 2020). Secondly, Lifebox, the Tegbareid Polytechnic College and the Ethiopia COVID-19 Response Team – a global volunteer team of more than 1,800 professionals from diverse fields – are working together on a patient monitoring system, pulse oximeters and electrocardiographs, and repairing existing medical devices for healthcare facilities in Ethiopia.

International organizations

According to the KIIs, some regions and sectors have received relatively better support from NGOs than others. Some examples of the contributions made by international organizations are as follows: WHO and the Africa CDC have contributed significantly to the Ethiopian health sector by donating COVID-19 lab testing equipment and providing lab training. ILO has provided support to the Ministry of Labour and Social Affairs for awareness creation for the manufacturing and textile industries in Hawassa and Mekelle, and for refugee hosting communities in Somalia and Tigray, as well as Ethiopian migrant domestic workers in major destination countries in the Middle East. The Irish Emergency Alliance via Plan International has helped Ethiopia in awareness creation. The World Bank, IMF, World Food Programme (WFP), International Organization for Migration (IOM) and United Nations Children's Fund (UNICEF) have provided financial support. The Jack Ma Foundation has provided various kits and PPE. Qatar and the United States have provided testing kits and material support.

4.3 Inclusiveness and equity impacts of policy responses

This section discusses the inclusiveness of the policy responses to the crisis and the impacts on equity associated with the social, economic, political and geographic dimensions.

Social equity impacts and inclusiveness

The Ministry of Labour and Social Affairs provided cash support to 45,000 street children, food and sanitation support to 743,949 people from vulnerable groups and 13,863 detainees, as well as logistic support to 21,136 returnees from abroad due to the pandemic. The Ministry also provided counselling and support services to 29,654 people with various addictions, a three-month advance payment to 1,285,134 safety net beneficiaries (under the Productive Safety Net Programme), and food and hygiene support to 600,000 people with disabilities. Reaching the needy was a big challenge in terms of resource capacity and equity, particularly during the early stages of the pandemic.

Despite the challenges faced and the efforts made by the state to reach the needy, the KIIs revealed that the inclusiveness of the policy measures and social inequity were problems in Ethiopia. For example, the techniques used to deliver education during school closure were not inclusive and their impact lacked equity. The coverage of instruction by radio and TV to continue education during the pandemic was not only limited, but also interrupted by power cuts, which were more often in small towns and rural areas.

Poor families in both urban and rural areas were often unable to afford smart phones or other devices for their children to attend online education, and power supply and Internet distributions were skewed, affecting rural areas and poor people, more than urban and rich. Furthermore, urban students have more access to the Internet, power, TV and radio than rural students. Disabled students, students from low income families, and students in rural areas and small towns are less able to access classes through either TV or radio. Students with vision impairments are also unable to participated in TV classes involving practical activities. Participants in the KIIs confirmed that, due to school closures in response to the COVID-19 pandemic, there was significant learning losses and huge inequalities, affecting disadvantaged segments of the population the most. Inequalities in access to quality education between children in urban and rural localities, and between children from families with higher and lower socio-economic status, which already existed pre-COVID-19, were exacerbated by the pandemic. Children with disabilities, children with special needs, and disadvantaged children (such as girls from low-income families and children from rural areas) were highly affected by school closures. The KIIs also reported that the closure of schools increased the risk of sexual exploitation and assault, early marriage, and forced labour in some regions. In rural areas, both boys and girls were forced to engage in child labour during school closures and to support their parents in farming and livestock herding. An interviewee from the Ministry of Education added that the school closures meant that the school feeding was terminated, which caused more challenges for urban students than rural students. At the request of the communities, the school feeding programme was later reinstated. Moreover, the school closures led to idleness and frustration among many rural boys and girls, and increased early marriage (e.g., of school-aged girls in Afar region) and migration to urban areas in search of jobs (e.g., in South Gondar) (Emirie et al., 2020). An interviewee from the Ministry of Innovation and Technology said that the interventions were not inclusive and so lacked equity, because the pandemic is new and we were not able to plan for it in advance to ensure inclusiveness and equity.

According to the World Bank survey, the responses to the pandemic led to challenges with inequity and inclusiveness in terms of access to education in Ethiopia, across the urban-rural divide and according to income status. For instance, in the first round of the World Bank (2020) survey, 86% of students in rural area who were at school before the pandemic did not attend online school, compared to only 57% of urban students. Furthermore, in round two of the survey, the number of rural children who gave up education after the pandemic was significantly higher than the number of urban children. The World Bank data also showed that the education of children from the poorest households was more affected than those from middle income households and the richest households, in rounds one and two of the survey. The impact of the response measures on education was gender neutral (see Figure 1). However, the interventions in response to the pandemic had an unequal impact on children's education depending on region. During the first round of the World Bank survey, the proportion of children engaged in learning activities after the pandemic responses was the highest in Addis Ababa city (66% of children who were in school before the pandemic continued) and Tigray (61%) compared to other regions (1% to 36%) in round one of the survey. In round two, the proportion of children who continued their education increased to 77% in Tigray, followed by 67% in Addis Ababa, and 59% in Dire Dawa. In the third round of the survey, in all regions, school attendance increased significantly because of the efforts of state and non-state actors (see Figure 1). Other studies also found that the majority of rural students in Ethiopia did not have access to online education due to Internet connectivity problems or power cuts (Emirie et al., 2020).

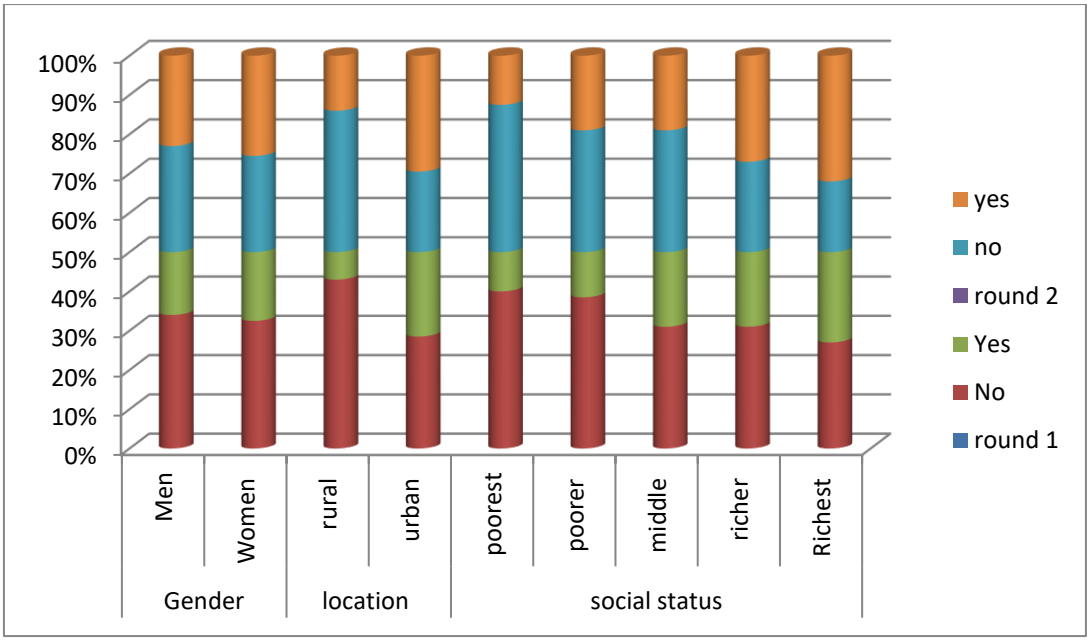


Figure 1. The education equity impact of the response to the pandemic[2]

Source: World Bank (2020) survey

Although they lacked equity and inclusiveness, the Ministry of Education implemented several measures (e.g., assignments, tutors, educational TV and radio programmes, and mobile apps) to enable children to continue their education during the pandemic (MoE, 2020). Most of these interventions increased the access of children from male-headed households to education, more than they did for children from female-headed households, during the first and the second rounds of the World Bank survey. However, female-headed households used mobile learning apps more in the first and second rounds of the survey and educational TV programmes more in the second round. All of the interventions to continue education were used more by urban than by rural students in both rounds, while interventions increased access to education in both locations in the second round of the survey. The variation due to location may be attributed to the fact that people from urban areas have more access to technology and the Internet than people from rural areas. The richest households used technology intensive for learning activities, compared to the poorest households in first and second rounds. While the poorest households deployed more radio and tutor learning activates during both periods, compared to the richest quintile of households (Figure A2, see annex). Regional inequity was also significant in the first round of the survey, although the use of virtual learning increased in the second round of the survey. For instance, in round one of the survey, the greatest number of students completed assignments provided by teachers in Afar (58%), followed by Oromia (57%) and Gambela (54%), but none of the students completed assignments in Somali and only 2% completed assignments in Amhara. The use of mobile apps for education was the highest in Somali region (100%), followed by Addis Ababa (40%) and Afar (32%). The proportion of students who watched educational TV programmes was the highest in Harar at 47%, followed by Amhara at 44%. Listening to educational programmes on radio was the highest (86%) in Benishangul-Gumuz region, followed by Tigray (75%), Amhara (66%) and Gambela (39%). The Ministry of Education acknowledged that e-learning has certain shortcomings in Ethiopia in terms of equity and access. It is difficult for a home-

[2] Men and women in figure 1 & 2 stands for proportion of students in men and women headed households respectively

based approach to study to be effective in a country like Ethiopia, due to the high level of illiterate parents, who are unable to assist their children. In addition, the curriculum materials are not designed to promote an interactive approach. The pandemic has also caused emotional problems for some; for example, a 19-year-old disabled girl living in Hawassa city described missing her classmates since the school closures.

The participants in the KIIs explained that the main purpose of the instruction methods designed during school closure were not to assess students' performance, but to reduce anxiety and send a signal to students that they have not been ignored and reassure them that they would go back to school when the spread of the virus decreased. Accordingly, online instruction using Telegram was not used for assessment, and only the portions covered before COVID-19 were used to assess the performance of students. This also had limitations, as all schools could not cover all parts of the curriculum. In some regions, school closures also inhibited children from discussing their personal problems with each other to get peer advice on private issues that they do not share with their parents.

Although COVID-19 has affected everybody, an expert from Oromia region pointed out that efforts were made to provide support to vulnerable persons in the region. Certain people were more prone to contracting COVID-19, such as those living in slum areas, which are overcrowded, making social distancing difficult, and industrial workers, who are generally exposed to more contact with people in the work place. Lockdown measures have also disproportionately affected the poor; for example, school feeding programmes stopped during school closures; lockdown measures increased domestic violence against women in Southern Nations, Nationalities, and Peoples' Region (SNNPR); and prisoners were more affected as they were not able to receive visits from their lawyers or other service providers. In the private sector, hotels and tourism have been the most affected. Halving the number of passengers on public transport has doubled transportation costs, burdening the poor more than the rich, as they are the greatest users of public transport.

Although people with disabilities have knowledge of the pandemic and prevention measures, they have had difficulties practising social distancing measure. For example, visually impaired people and wheelchair users are often in need of community assistance, but some people are unwilling to assist them due to the risk of infection. Pedal pipelines that can be opened by foot to reduce contacts installed in offices cannot be used by people without the use of their legs and some disabled people do not have the dexterity to use a face mask. An 18-year-old visually impaired girl in the capital expressed sadness that, since the pandemic, people have been unwilling to help her, although she understood people's hesitancy because of the pandemic. In a tragic incident, a visual impaired man in Dire Dawa town locked himself in a house and burned himself, because he thought that nobody wanted him (Emirie et al., 2020). Income constraints and disabilities have meant that policy measures have had different impacts in urban Ethiopia. A 19-year-old physical disabled girl in Bahir Dar explained that she shared a toilet with others and was worried that if she got infected she was sure that her body would not be able to cope with it; she added that the pandemic is less likely to infect the affluent, who have access to their own toilet and bathroom, than people like her. Disabled migrants often live in very low-cost housing in Addis Ababa, without private piped water and toilets, and are, therefore, more at risk of infection (Emirie et al., 2020).

In some regions, the key informants interviewed observed that health services also lacked equity and inclusion. Hospitals give priority to COVID-19 patients, which means that essential health services are compromised. For instance, key informants advised that, since the pandemic, more mothers had delivered their babies at homes instead of in a hospital. Hospitals also reduced the provision of essential health services at the beginning of the pandemic, to reduce the risk of health workers being infected, and service

users were more likely visit private hospitals where testing is not mandatory. The diagnosis of malaria, measles, and other frequently occurring diseases decreased, as resources were channelled to COVID-19 and some health workers were infected and quarantined. To address the inequity, the regional health bureaus established COVID-19 diagnostic teams and other disease teams. Some regions allowed people to quarantine at home, but latter experts noted that this strategy was not feasible for larger households, particularly the poor who had insufficient rooms in their dwellings to isolate. To address this challenge, households with insufficient rooms were transferred to public quarantine centres. Other problems also occurred, for example, a 19-year-old disabled girl with a 4-year-old child in Bahir Dar town had an unplanned pregnancy during the pandemic and realized too late, as she was preoccupied with the economic challenges brought on by COVID-19 (Emirie et al., 2020). The key informants interviewed mentioned that demand for water increased during the pandemic, which led to water shortages in some regions, and many used the toll-free call centre to complain about the shortage of water, instead of using it to report outbreaks of COVID-19.

According to the World Bank survey, the number of people in rural areas unable to access sufficient medicine was higher than in urban areas in all rounds of the survey (48% for rural people compared to 12% for urban people in round one). More people in urban areas were in needed of medical treatment and able to access treatment than in rural areas, in all periods (round one: 19% in urban areas, 14% in rural areas; round two: 24% in urban areas, 22% in rural areas; round three 20% in urban areas, 18% in rural areas). In addition, the richest people were more able to access treatment than the poorest in all periods (see Figure 2).

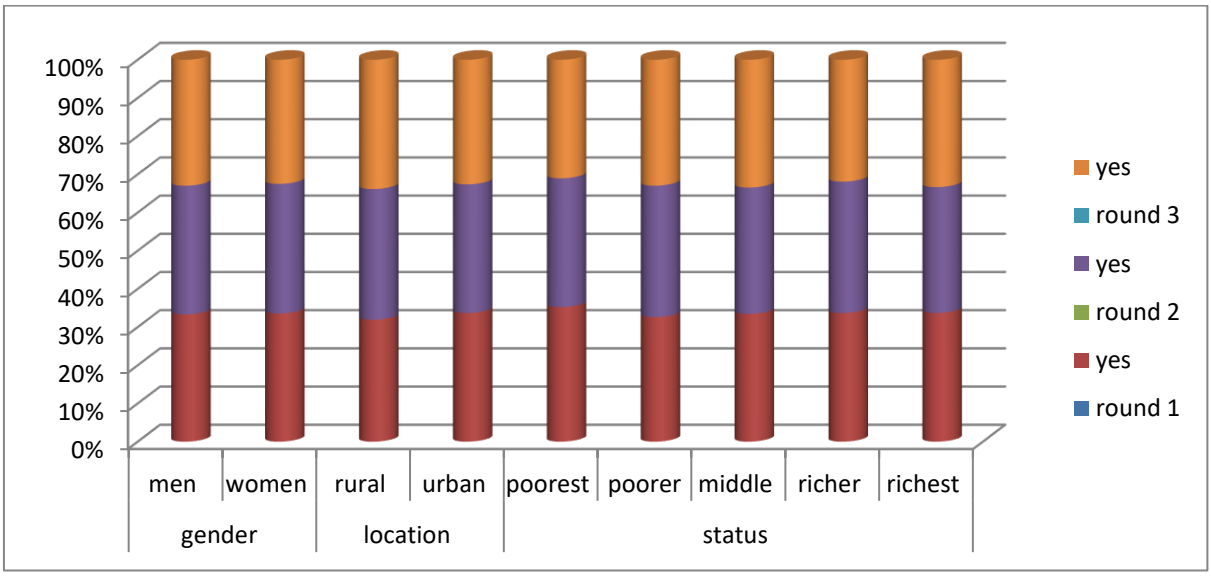


Figure 2. People in need of medical treatment who were able to access treatment during the pandemic

Source: World Bank (2020) survey

A significant number of people in need of medical treatment accessed medical treatment in all regions, with some variations across regions. The highest percentage of people in need of medical treatment who were able to access it was observed in Somali region (100%) and the least in Amhara (85%), during both the

first and second rounds of the survey. In the third round, the least access by people in need of treatment was observed in southern Ethiopia (82%) and the highest in the Afar region (100%). Moreover, urban youth in Ethiopia with disabilities faced additional obstacles in accessing sexual and reproductive health services due to accessibility problems posed by the response to the pandemic.

Economic equity impacts and inclusiveness

In terms of economic inclusiveness, the economic policy measures implemented by the Government of Ethiopia were considered to be inclusive by the key informants, however, the KIIs revealed inequity in terms of the economic outcomes of these interventions. All economic sectors were targeted, but the policies placed more emphasis on airlines, industry parks, the health sector, the education sector, hotels and tourism. Interviewees explained that, in collaboration with the transport sector, efforts were made to ensure that agricultural inputs were not disrupted and productivity did not drop. Some others, however, confirmed that 249 business persons selling perishable products (like tomato and injera[3]) were quarantined and their products had spoiled by the time they returned to Oromia region. In addition, the key informants interviewed said that the lockdown measures affected the poor more than rich. In some regions some family members had to stop working or lost their jobs because they had to take care of their children following school closures. Mengistu et al. (2020) explained that export-oriented firms were more likely to receive government support than firms serving the domestic market. Goshu et al. (2020) found that agricultural operations were less adversely affected by the response to the pandemic than non-agricultural businesses. In the following sub-sections we examine the inclusiveness and equity of the economic impacts of policy responses on employment, income, total income and food security.

Employment

The World Bank survey found that many who were employed pre-pandemic had lost their jobs since the pandemic for several reasons: they were casual workers, their contract was terminated, they contracted coronavirus, or they were retired. Job losses also had unequal impacts on men and women. For example, businesses closing because of the restrictions due to the coronavirus response resulted in more job losses for men than women in all three rounds of the survey. Urban job losses due to business closure were significantly higher than rural job losses, indicating that the impact of the pandemic (and response measures) were greater in urban areas than rural areas. Business closures due to pandemic response measures resulted in more job losses by poor people than rich in all rounds of the survey (as shown in Figure 3).

[3] A sour fermented flatbread made of teff flour that is an important part of the traditional diet in the Horn of Africa.

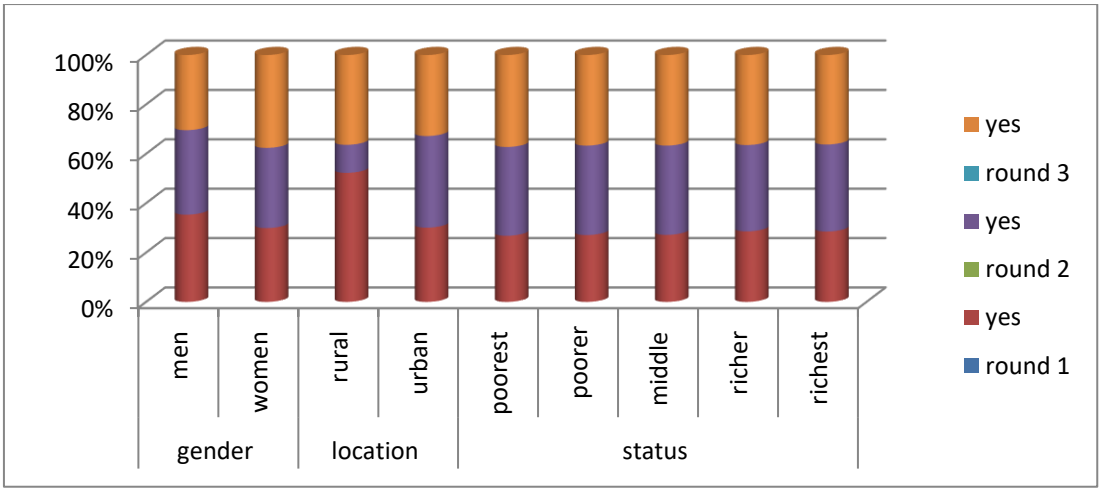


Figure 3. Equity of the impact of jobs losses due to business closure as a result of the response to the pandemic

Source: World Bank (2020) survey

However, employment in the formal sector was not affected by COVID-19 responses, according to those who participated in the KIIs, as these sectors were restricted by the government from laying off people due to the pandemic. Some organizations continued to work using various modalities, for example, some universities provided education via online platforms and some business were able to continue operating using online orders, deliveries, or with staff working from home. However, those in the informal sector were greatly affected by the partial lockdowns, for example, housekeepers and those working in the entertainment sector, but these groups were supported in various ways.

Income

The World Bank survey found that the COVID-19 policy responses impacted on income and living costs differently according to gender, location and social status. Men engaged in agriculture lost significantly more total income than women, in all survey periods (Figure A3, see annex). Moreover, rural farm income was more affected than urban income in all periods. For the poorest of the poor, farm income was more affected by the response measures, although the difference in impact was less than the difference between rural-urban workers and men-women. Inequalities in loss of farm income were also seen across regions. In the first round, the total farm income loss was highest in the Harar region (79%), followed by Addis Ababa (71%). Although these areas are urban, the most urbanized regions in Ethiopia faced high income loss, because of the high number of cases in urban areas.

Income from wage employment has also changed since the pandemic started. The total loss of income from wage employment for women was more than that for men in all periods of the survey (Figure A4, see annex). In contrast to agricultural income, the pandemic reduced wage employment income more in urban areas than in rural areas, and the 'richest' and 'richer' income groups experienced a greater drop in income than the 'poorest' and 'poorer' groups in all three survey periods. The KIIs also revealed that the income of private school teachers was reduced or lost entirely after the school closures. However, during closures parents paid 50–75% of school tuition fees and it was compulsory for private schools to pay their staff a full salary. Regional variations in income from wage employment also existed due to responses to the pandemic. With a 47% reduction in income from wage employment, the Somali region experienced the

highest drop – more than double of most other regions. With 20% of total employment income lost during the same period, the Somali region was harder hit by the pandemic responses than other regions. During the third round of the survey, the highest total wage employment income loss happened in Amhara region and Dire Dawa city administration (20% in both). The KIIs also revealed that in some regions the job losses increased or the incomes of workers decreased. They added that in Gambela region, because of the response to the pandemic, businesses selling food on the roadside and entertainment venues (like pool halls and billiard halls) were more affected.

Total income change

The pandemic responses also resulted in a total income change in Ethiopia. The total income of male-headed households decreased more than female-headed households in all periods. For example, the incomes of women dropped by 28%, while the incomes of men declined by 72% in survey period one (Figure 4). The total income of urban people dropped more than that of rural people and income reductions increased along the social status ladder in all survey periods.

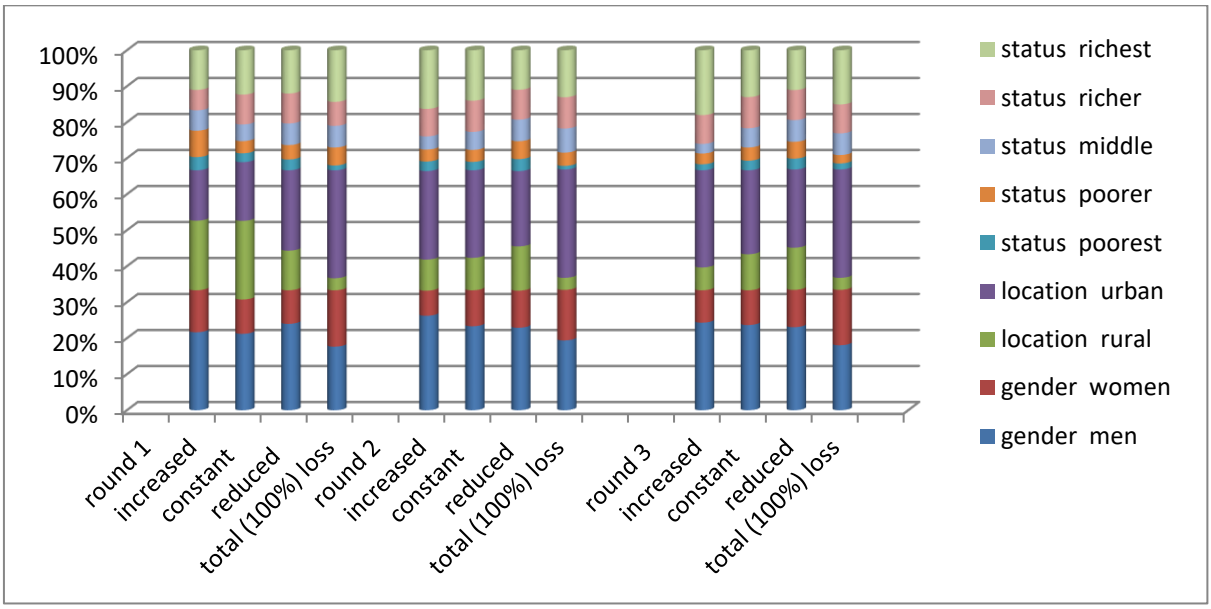


Figure 4. Impact of pandemic responses on total income

Source: World Bank (2020) survey

Total income dropped in all regional states. With 94% of the households reporting total income reduction, Somali region was highest, followed by 58% in Tigray and 57% in Oromia, in round one of the survey. In all other regions, income reduction during this period was between 40% and 50%. In the third round, the highest income reduction was again in Somali region, at 94%, however, the income reduction in all other regions was still significant, ranging from 19% to 42%. In both periods, the income reduction in Somali region was significantly higher.

Food security

Like income, the impact of food security due to the response to the pandemic was unequally across gender, location and income status. The pandemic also caused rural-urban differences in accessing food items. For example, in round one of the survey 44% of rural people reported being unable to buy sufficient 'injera', the local staple food, compared to 17% of urban people. The results indicate that, although the majority of rural people in Ethiopia were employed in the agricultural sector during the pandemic, they were still unable to buy sufficient food. Both female and male-headed households reported running out of food in the 30 days prior to the survey in all periods, and female-headed households were more food insecure than male-headed households. On average, urban people were more food insecure than rural people, and over 20% of households reported running out of food in the last 30 days, in both urban and rural areas, in all three survey periods. The response to the pandemic caused the poorest people to be more food insecure than the richest people in all survey periods, with 25% reporting running out of food in the last 30 days, compared to about 10% of the richest group, in all the survey periods, indicating that the pandemic response has widened the gap in food insecurity among different income groups.

The response to the pandemic also affected other indicators of food security. The number of household members who were hungry, but did not eat, during the 30 days prior to the survey was higher in female-headed households than male-headed households in all three periods of the survey. Similarly, the number of rural people who were hungry, but did not eat, during the last 30 days was higher than the number of urban people in all three survey periods. As would be expected, poor people were far more food insecure than rich people, in all three survey periods. In the first round, 57% of poor household members were hungry, but did not eat, during the last 30 days, compared to 36% of rich household members. The number of household members who were hungry, but did not eat for a full day due to lack of resources, was significantly higher in female-headed households, than male-headed households, across all three periods. The number of rural people who were hungry, but did not eat for a full day due to lack of resources, was considerably higher than the number of urban people who were hungry, but did not eat for a full day, in all periods. For instance, in round one of the survey 18% of rural people were hungry, but did not eat for a whole day because of lack of resources, while only 8% of urban people reported the same. The number of people from the poorest group who were hungry, but did not eat for an entire day due to lack of resources, was higher than the number from the richest group (Figure A5, see annex). According to the KIIs, some households have reduced the number of meals per day, from either 3 to 2 meals or 2 meals to 1 meal a day. Moreover, people from lower income groups and people with disabilities have become more food insecure, but the key informants reported that better-off people were providing support to vulnerable neighbours.

Differences in food security were also observed in the regions during the response to the pandemic. The number of households that reported running out of food in the last 30 days varied across regions. The Somali region was the highest with, 64% of households reporting running out of food in the last 30 days, followed by Afar (40%) and Tigray (28%), during the first round of the survey. All other regions ranged from 8 to 24%, which is still a significant proportion of people running out food. In the second round of the survey, the SNNPR was the most food insecure region with 40% of households running out food in the last 30 days, followed by Tigray (37%). In the third round, Afar was the highest with 38%, followed by Tigray (32%) and SNNPR (31%). With regard to household members who were hungry, but did not eat in last 30 days, Somali was the highest with 81%, followed by SNNPR with 25%, during the first round. In the second and the third round surveys, household members who were hungry, but did not eat in the last 30 days dropped sharply, with SNNPR reporting the highest level of food insecurity (20% in the second and 17% in the third round) and food shortages were reported in all other regions as well (see Figure 5).

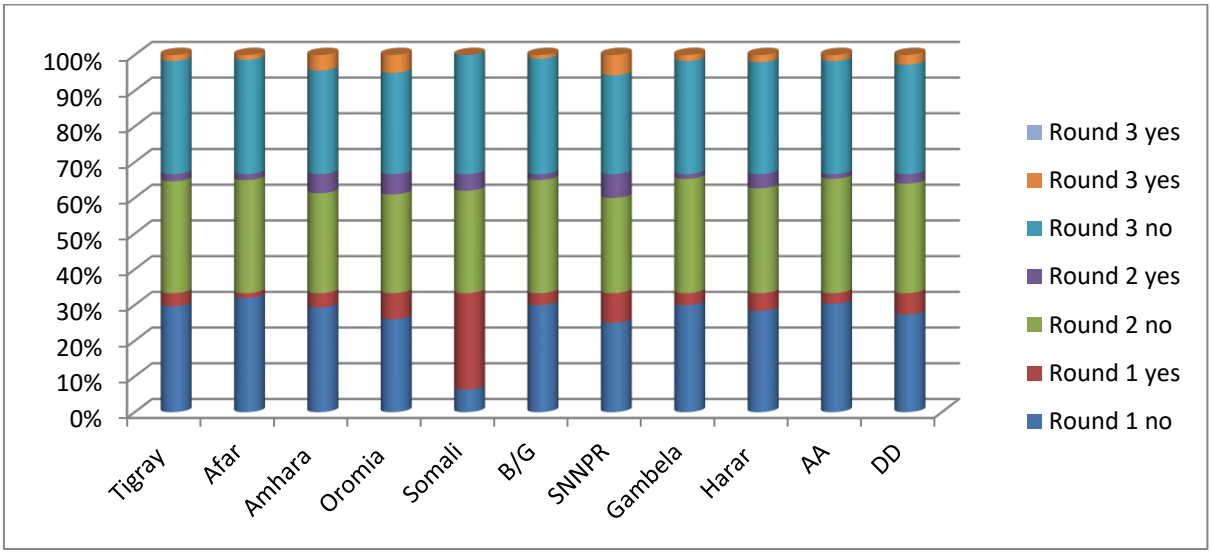


Figure 5. Household members who were hungry, but did not eat, in last 30 days, during the response to the pandemic[4]

Source: World Bank (2020) survey

Household members who were hungry, but did not eat for a full day due to lack of resources, varied significantly across regions. The larger figures (80% and 43%) were observed in Somali region in the first and second round of the survey. Although the proportion in all other regions was below 10%, this is still a significant proportion of people who lacked food in all regions. The key informants stated that in Oromia, women and children were more affected and the identification of maternal and child malnutrition problems had decreased since the pandemic started (due to suspected under-reporting). In SNNPR, children were more affected, as job losses by parents increased the malnutrition of their children. To solve this problem, the government injected money into safety net programmes (such as the Productive Safety Net Programme). The federal government initiated a campaign known as 'Sharing Food with Others'. In SNNPR, the number of passengers per bus was halved and the transportation costs doubled per person, which affect the poor the most.

Location and temporal equity and inclusiveness

Some key informants explained that while mitigation measures were implemented across the country, most policy responses and awareness creation, including pandemic-related research and funds, were concentrated in urban areas, particularly the capital. Regional differences were observed in relation to emphasis on response measures. Only a few people in large regional cities, other than Addis Ababa, used face masks. The World Bank data shows that 96% of households in rural areas stopped shaking hands, compared to 98% in urban areas, and 82% of people in rural areas and 89% of people in urban areas reported avoiding public gatherings, revealing rural-urban differences in practising the measures. The percentage of people avoiding handshakes was high in all regions, ranging from 92% in Amhara to 99% in Addis Ababa and Dire Dawa. Avoiding gatherings was the least practised measure, ranging from 67% in

[4] In figure 5, AA, DD, and B/G respectively refers to Addis Ababa and Dire-Dawa City administration and Benshangul Gumuz regional state. Note: 'Yes' stands for household members who were hungry, but did not eat, in the last 30 days; 'round' refers to the World Bank survey period (round 1: 22 April to 13 May 2020; round 2: 14 May to 3 June2020; round 3: 4 to 26 June 2020)

Amhara region to 95% in Dire Dawa city administration. Interestingly, the pandemic increased access to potable water access in some regions, like Harar, to meet the hygiene standards.

With regard to temporal variations, the interviewees in the KIIs distinguished two phases of the public practising mitigation measures. In phase one, during the State of Emergency, people were aware of and carefully practising the measures. In stage two, after the State of Emergency, people had knowledge, but many were reluctant to practise the mitigation measures, even though the number of cases and deaths were still increasing in Ethiopia at that time. Moreover, although the pandemic is real, some people still doubt the existence of the virus and see it as a ploy by the ruling party to postpone national elections (which were to be held in May 2020); others associate the disease with 'white people'. People who have seen COVID-19 patients in their neighbourhoods or had the virus themselves were more likely to practise the measures. This indicates that there is still room for improvement in raising awareness about the need to practise mitigation measures.

Political equity and inclusiveness

According to the participants in the KIIs, the policy response to the pandemic was inclusive in that it involved all political parties in COVID-19 interventions. But some parties, refused to work together with the ruling party for political reasons, including because the government had postponed national elections because of the pandemic. Some opposition parties hindered the efforts of the government to reduce the spread of the virus. Some of those who opposed the government's policies saw the response measures as the governing trying to achieve its own political agenda. However, the majority of political parties were cooperative and engaged in resource mobilization, awareness creation and participated in important decisions. The active involvement of political parties and the commitment of political leaders (both ruling and opposition) contributed a lot and facilitated efforts to reduce the spread of the pandemic.

4.4 Challenges and opportunities posed by the pandemic

This section presents the challenges and opportunities posed by the pandemic and the government's response measures. The major challenges examined are the pressure on health workers and facilities, the risk to health workers, and the distribution of welfare benefits and corruption. The opportunities discussed are positive structural changes and the innovations that emerged as a result of the pandemic.

Country experiences adopted in crafting a policy

The Ethiopian policy response is unconventional in many respects and evolved over time. Experts from the Ministry of Labour and Social Affairs and EPHI said that, in developing its policy response, Ethiopia considered best practices from South Korea and China, but customized them to the national context. WHO's guidelines and the guidelines of the Africa CDC were also used as a reference. An expert from the EPHI who participated in the KIIs pointed out that although other countries' experiences were assessed, a home-grown strategy was developed in Ethiopia, focusing on primary health care as health sector strategy.

Some regions stated that they strictly followed federal government directives and mitigation measures, but a few said that they were also guided by international experiences. For instance, a key informant from Harar and SNNPR explained that these regions adopted practices from China, WHO, the United Nations and other bilateral organizations. Regional health bureaus and institutes had weekly Zoom meeting with the Ministry of Health, which helped them to share experiences.

Sociocultural factors and policy responses

Ethiopia is also unique socioculturally: 99.3% of the population belong to different religions and 69% of the population are under 29 years of age. The health policy in the country focuses on prevention and primary health care. All of these things could potential be entry points and opportunities to combat COVID-19 in the context of Ethiopia (Getaneh et al., 2020).

Sociocultural factors can either positively or negatively contribute to the implementation of COVID-19 policy measures. Although religious organizations contributed money and resources to support the poorest members of their congregations, religious leaders insisted that the government shorten the State of Emergency, as it banned public gatherings, including for religious worship. Many postponed wedding ceremonies, and some donated the money to help those in need. However, some key informants said that people were opposing practising social distancing at funerals and in religious places. Public transportation, which is often overloaded, also hindered social distancing. In addition, there were frequent water storages, which made regular hand washing impossible.

Religious leaders have complained that members of their congregation were falling into 'bad habits' due to the lack of regular services. In response, the government eventually allowed religious gatherings with caution, despite the fact that COVID-19 cases were increasing at the time. However, precautionary measures, like taking people's temperature, were implemented at the gates of churches and mosques. Cultural greetings also impeded the implementation of policy responses. For example, people resisted stopping shaking hands, and some used leg touching as a substitute. Funeral gatherings increased and the number of passengers using public transportation exceeded the number of seats. At the same time, efforts to stop public gatherings were politicized by some opposition activists.

Pressure on health workers and facilities

Experts and leaders who participated in the KIIs explained the problems posed by resource constraints (such as inadequate budget funds, human resources, economic and social services, ventilators and hospital beds) in the early stages of the pandemic. Although some of these constraints have been gradually lifted, others persist, and there are regional variations. In some regions, the quarantining of health workers increased the workload of other health workers. Health workers were also scared and disappeared from the work place, as they saw their colleagues become infected with the virus. The pandemic also increased the burden on health workers providing essential health services, as many were assigned to deal with the pandemic; this problem was later solved by an intervention. However, some regions still have a shortage of ventilators and oxygen, as the critical cases were below the WHO standard for allocation of such resources (the threshold is 5% of cases are critical cases). Oromia region faced a shortage of ICU beds and PPE, but locally manufactured materials were used to fill the gap. In SNNPR, more health workers were employed, but shortages of oxygen, hospital beds and ventilators continued. Harar region had a strong risk reduction and emergency preparedness plan that helped to overcome the shortage of health workers.

Risks to health workers

Ethiopia took the health safety of workers seriously. At the beginning of the pandemic, the focus was on the availability of PPE. The health sector made efforts to obtain support from various national and international organizations. For instance, in most regions, sufficient PPE (like gloves, masks and \sanitizers) and trainings were provided to health workers. According to, although health workers in

Ethiopia faced increased health risks during the pandemic, they do not have full insurance coverage. Since the pandemic started, over 1,500 health workers have been infected and some passed away until December 2020.

Distribution of welfare benefits and corruption

The key informants (many of who were from government departments and ministries) had insufficient information about corruption during the COVID-19 response. Some said that the State of Emergency, which was strictly controlled by the security sector, may have reduced rent-seeking behaviour, as people were engaged in supporting the vulnerable, motivated by altruism rather than self-interest. However, an interviewee from the Ministry of Health explained that in some areas, including the Ministry, there were attempts to divert funds, although these were controlled.

Key informants mentioned some incidences of corruption. In some places, youth groups took a yellow t-shirt from the health bureaus to wear when collection donations, but ended up collecting money for their personal use. In SNNPR, although there was strong involvement of volunteers and follow up mechanisms, some minor rent-seeking behaviour was observed. In SNNPR, the State of Emergency proclamation halved the number of passengers and doubled the price charged for public transport, but some service providers did not half the number of passengers. However, overall, the level of corruption in the country does not appear to have increased since the pandemic, according to the key informants interviewed, however, further research would be required to confirm this.

Structural changes and innovativeness of policy responses

The policy response to the pandemic has led to some structural changes and innovation in Ethiopia. The main innovation has been in the education sector, with many institutions providing online learning for students. An expert from the Ministry of Education who participated in the KIIs explained that students had to overcome various challenges and develop self-learning habits during the pandemic, which has enhanced their resilience. The use of technologies like Telegram, mobile apps for education, and online education has increased among teachers, parents and students, albeit these methods have been accessed more by urban than rural students. This change has the potential to be more inclusive (as students are not limited by distance), however, it has been hampered by power cuts and issues with Internet connectivity.

As well as developments in education, there have been many other innovations in Ethiopia, including cost-effective ventilators, portable washbasins, and mobile apps for check-ups and monitoring (Table A7, see annex). As well as innovations, good practices have emerged and been strengthened, such as team work, increased access to laboratory equipment, and a multisector approach to addressing health challenges. In addition, support for the health sector has increased. The number of hospital beds has increased, as well as inputs (such as PPE and disinfectant) and equipment. The increase in hand washing has reduced the frequency of other diseases, like cholera and diarrhoea, and the provision of the toll-free call centre has resulted in the early reporting of these diseases. However, the calls received have mostly been about water shortages, instead of COVID-19 cases. Research by universities and other collaborations with health centres and hospitals have increased. Virtual meetings, such as Zoom, have created an opportunity to discuss issues with a broader range of stakeholders, including linking high government officials and regional governments, as well as reducing the cost of traveling and renting a venue for meetings. However, the power cuts and issues with Internet connectivity have restricted meetings, requiring the upgrading of

infrastructure. The understanding of health workers and leaders about the importance of ICUs and other equipment has also increased.

Policy responses and challenges

The interviewees confirmed that the policy responses, particularly the school closures, have had a negative impact on people's lives. Some have faced violence, including sexual violence, and others have even been the victims of early marriage. The expert from the Ministry of Education disclosed that school closures due to the pandemic were expected to have a negative impact on children's education in the long term. For example, existing data on school drop-out rates has shown that when children are absent from school for an extended period of time teenage pregnancy, early marriage, child labour, and sexual exploitation and abuse tend to increase. Moreover, education experts say that school closure has put psychological pressure on students, who have missed their peers' advice and companionship, which cannot be replaced by their parents.

In the health, education and water sectors, the pressure has been high and COVID-19 has affected these sectors significantly. For example, in some regions, mobility restrictions have increased violence against women, including sexual violence, and restricted the access of these women to legal services. Furthermore little attention has been given to such challenges by communities. Water shortages have occurred in various regions and water had to be brought in using a lorry in regions and villages. Water storage tanks were repaired to stock water in some schools.

Chapter 5. Summary, conclusion and recommendations

5.1 Summary of findings

This case study examines the various policy responses (public and social, economic, and governance and lockdown) implemented by the Government of Ethiopia and non-state actors to reduce the spread of COVID-19. Unlike some countries in the region, the lockdowns in Ethiopia were partial and selected restrictions were imposed. Efforts were guided by a prevention focused health sector strategy and the government worked to maintain the balance between preventing the spread of the virus and keeping the economy and other social sectors open.

The analysis in this study shows that higher officials, civil society organizations, businesses, media outlets and religious institutions in Ethiopia all played a proactive role in public awareness creation, resource support and mobilization to fight the pandemic. The government declared a State of Emergency, which prohibited public and private companies from laying off employees and included various restrictions and adjustments to enhance the effectiveness of the COVID-19 policy response. The State of Emergency also transferred government decision-making power to the Cabinet, prohibited the dissemination of COVID-19 related information that would cause terror or distress, and improved the use of public health measures.

The federal and regional governments adopted important economic policy responses, including injecting liquidity to allow banks to reduce interest rates and grant extensions to firms for the repayments of loans. Provisions were also made for the rescheduling and cancellation of tax debts. Governments mobilized resources to buy health equipment and improve/establish facilities to treat COVID-19 patients. The 'trace, test, isolation and treatment' approach to COVID-19 cases was effectively employed as a protection strategies in Ethiopia. Although policy responses were limited at the beginning, later quarantine centres and testing facilities were expanded and a hospital in the capital allocated to solely treat COVID-19 patients. However, health facilities competed for limited health resources to control the pandemic and health workers were unable to fully provide essential health services as well as handle the pandemic. Although the state enforced social distancing through the State of Emergency, the shortage of rooms in which to quarantine in some dwellings, shortage of water for hand washing in some parts of the country, power cuts, and lack of Internet connectivity were some of the challenges faced.

With regard to leadership and governance, various committees (led by the Prime Minister) and sub-committees were established and helped to make non-routine decisions to address the challenges that arose. Civil society organizations provided significant resources, including funds, and engaged in awareness creation (information dissemination focused on COVID-19 transmission, protection and screening campaigns) and provided training to health workers. The private sector donated significant financial and other resources and, in response to requests by the state, some firms shifted production to PPE and provided paid leave to their staff to reduce physical contact.

Although support was provided by government and non-government actors to vulnerable social groups, the equity and inclusiveness of these policy measures has been questioned. School closures were implemented and virtual platforms and other modalities used to continue education, which resulted in a high level of inequity. Lessons that use TV and radio programmes and online learning exclude those who do not have access to those devices, power supply and the Internet, as well as some people with disabilities, like the visually impaired. Children in urban areas, particularly big cities, benefited from such learning modalities more than rural children and children living in small towns. The emphasis on the pandemic compromised essential health services and decreased the number of patients visiting hospitals

and accessing maternal care. In addition, the lockdowns increased domestic violence, sexual assault and early marriage, as well as the school drop-out rate. According to the World Bank data, the partial lockdowns in Ethiopia affected access to food and medicine more in urban areas than in rural areas, resulting in some regional variations, but these differences were not necessarily gendered. The pandemic responses also led to differences in access to education and health services according to income class and location (rural-urban). In addition, the mechanisms and innovations used to reduce physical contact discriminated against the disabled. Home quarantines were impossible for the poor, as most lacked sufficient rooms in their dwelling. Efforts to reduce the transmission of the virus concentrated on urban areas and protective measures were less practised in rural areas. At the beginning of the pandemic, responses exacerbated existing resource constraints in the health sector, including lack of human resources and equipment shortages, but latter these constraints were alleviated, despite some regional differences. The health sector received support from various sources and supplied PPE to health workers. However, many health workers were infected with the virus and some died as a result. Despite the risks they are exposed to, health workers in Ethiopia do not have comprehensive insurance.

The participants in the KIIs explained that the lockdown measures disproportionately impacted on those working in the informal sector, airlines and the entertainment sector, but had less of an impact on agriculture. Moreover, the World Bank survey revealed that policy responses caused more total income loss in agricultural and wage employment to men than women. Rural farm income was more affected than urban farm income; however, unlike farm income, the measures reduced wage employment income more in urban areas. Income loss from regional inequities in farm and wage employment were also significant. Moreover, the policy response significantly impacted on food security equity in Ethiopia. Female-headed households were more food insecure than the male-headed households; the poor more food insecure than the rich (although a significant proportion of the rich were also food insecure); and rural people more food insecure than urban people (although there were some instances of urban people being more food insecure than the rural people, in some regions and at some times).

In crafting its response, Ethiopia employed home-grown policies, drawing on international experiences and adapting various practices. Federal and local government officials and experts conducted weekly (virtual) meetings to share good practices and experiences and to evaluate limitations. The decentralized *kebele* administration in Ethiopia assisted in identifying vulnerable groups and distributing resources to these groups. Ethiopia is a country of many religions and a mainly young population, which presents both opportunities and challenges to implementing policy measures. Religious institutions participated in awareness creation and provided material and financial support to the vulnerable; however, churches and mosques strongly pressured the government to lift the State of Emergency, arguing that their members were developing ‘bad habits’ due to the lack of religious instruction. Many youth postponed weddings and even donated funds to vulnerable people, although youth were often reluctant to use masks and other protective strategies and equipment. People also continued to attend mass gatherings during annual festivities and efforts to stop this were politicized by some political parties and groups to further their own agendas.

The distribution of welfare benefits during the pandemic did not result in any significant corruption (according to the key informants), although there were some minor incidences of corruption reported. On a positive note, the policy response led to some structural changes and innovation. For instance, students developed self-learning habits and the use of technology for education was explored by students, parents and teachers. Some of the other innovations included a touch-free hand washing machine, which was developed to reduce contact. Frequent hand washing also decreased the incidence of other diseases, like cholera and diarrhoea, and the toll-free call centre improved the early reporting of these diseases. Moreover, access to hospital beds and disinfection increased, collaboration was initiated and expanded

between university-health centres, and Zoom meetings removed the barriers to participation imposed by distance, facilitating experience sharing between stakeholders and decreasing travel and other costs.

5.2 Conclusion

The COVID-19 pandemic is the most devastating global event since World War II. However, there is much to learn from this pandemic. And there is much to be done in response to it, now and into the future, at an individual, community, societal and global scale. The aim of this case study was to systematically analyse how the Ethiopian national and regional governments and other stakeholders took equity into account in their policy responses and interventions during the COVID-19 pandemic. Based on the findings, this study concludes that the policy responses of the Ethiopian government were carefully considered and implemented step-by-step, taking into account the economic and social conditions of the country. Initially, the government declared a five-month State of Emergency and implemented partial lockdowns. This policy intervention maintained the balance between preventing the spread of COVID-19 and reducing the economic impact of the measures to contain the virus. The government focused on preventive measures, while at the same time maintaining some economic activities in industry, the service sector, and agriculture, with the aim of satisfying people's economic needs and while containing the spread of the virus. The integrated role of the government, NGOs (local and international), the private sector, community based organizations (CBOs) and the community at large was significant in these interventions, particularly in relation to awareness creation, resource mobilization and supporting the vulnerable. As a result, the overall effect of COVID-19 in Ethiopia has been relatively low.

However, the pandemic has highlighted other problems: the poor health system and inadequate preventive equipment and facilities (PPE, ICU beds, ventilators, and treatment equipment), inadequate social services (water, sanitation, power supply, and Internet connectivity), political turmoil and conflict, dependency on the informal economy, high level of unemployment, debt distress, and inflation, and low level of domestic resource mobilization – all of which were challenges in the fight against COVID-19. The equity impact was significant in terms of income, employment, food security, access to social services, and reaching the disabled, socially marginalized groups and those living with chronic diseases. The equity difference by gender, income status, and geographic location was also significant. However, the COVID-19 pandemic was not only a challenge, but also an opportunity to improve health infrastructure and promote technological innovation in the health, education and economic sectors. The pandemic has helped us to learn how to deal with similar heath crises in the future.

5.3 Recommendations

Due to the awareness creation efforts, people in Ethiopia generally have sufficient knowledge of coronavirus. However, the practical use of protection measures such as face masks is decreasing as the pandemic goes on. People are using protective measures such as face masks mostly in government organizations and transportation services, but less in other places.

Recommendation 1

As the COVID-19 pandemic is not yet under control, the government and non-state actors should reinforce the mandatory use of protective measures everywhere in the country.

The impacts of the pandemic on income, employment and social services have not yet been fully alleviated. Hence, marginalized people are still vulnerable.

Recommendation 2

State and non-state actors should continuing selective interventions (both financial and resource mobilization) to support vulnerable social groups until everyone is vaccinated and the pandemic is over.

The policy measures deployed in response to the pandemic in social, economic and governance categories lacked inclusiveness.

Recommendation 3

State and non-state actors should revisit the policy measures in place that resulted in the exclusion of the vulnerable groups and work towards more inclusive policies.

The policy responses to the pandemic have resulted in several inequities; for example, the mitigation measures differently affected men and women's incomes and food security, and caused inequities in urban-rural income and employment.

Recommendation 4

Tailor-made policy responses and implementation practices are required to mitigate the inequity of policy responses, instead of applying a one-size-fits-all approach across the country to all groups and in all locations.

The pandemic has provided an opportunity for leading institutions in Ethiopia to make structural changes and adopt innovations.

Recommendation 5

Taking the pandemic as an opportunity, research institutions and universities should strengthen their capacity and continue to increase the quality of health services. The use of virtual tools for meetings, online learning, and conferences is also encouraging and the capacity to use these tools should be strengthened and mechanisms to include people with disabilities adopted.

Recommendation 6

The Government of Ethiopia should expand and institutionalize existing social protection programmes in both rural and urban areas to reach vulnerable groups (such as the elderly, people with disabilities, women and children) on a large scale, to protect them from health shocks and to minimize the socio-economic impacts of the pandemic. This also requires measures to bring about equity among the various economic segments.

Recommendation 7

The Government of Ethiopia should strengthen its capacity to craft and implement fiscal and monetary policies to stabilize the economy. Home-grown economic efforts are encouraging, but should be supplement with relevant and evidence-based fiscal and monetary policies.

Recommendation 8

The capacity of social sectors (education, health, water, etc.) in Ethiopia needs to be strengthened to cope with various socio-economic challenges. In particular, the capacity of the health sector should be built to meet the demand for services; the quality and inclusiveness of education improved; and access to water should also be improved, especially in terms of equity and inclusiveness.

Recommendation 9

The Government of Ethiopia should promote inclusive development, targeting all economic and social sectors. It should formulate policies and strategies to recognize and support the informal economy, which plays a significant role in providing livelihoods for people in Ethiopia. Policies should also be formulated to address the problems of different vulnerable groups (e.g., the elderly, people with disabilities, women and children). All policies and strategies should be guided by the principles of inclusiveness and equity.

Recommendation 10

The Government of Ethiopia should strengthen its alliances and partnerships at the local and international level, for more inclusive development. The experience gained during the response to the COVID-19 pandemic should be capitalized on to prepare for similar interventions in the future.

References

Abate, G. T., De Brauw, A. & Hirvonen, K. (2020). *Food and nutrition security in Addis Ababa, Ethiopia during COVID-19 pandemic: June 2020 report*. ESSP Working Paper. Washington, DC: International Food Policy Research Institute (IFPRI).

AfDB. (2020). *African economic outlook 2020: Africa's economy forecast to grow despite external shocks*. African Development Bank Group (AfDB). www.afdb.org/en/news-and-events/press-releases/african-economic-outlook-2020-africas-economy-forecast-grow-despite-external-shocks-33839.

Adhikari, S. P., Meng, S., Wu, Y.-J., Mao, Y.-P., Ye, R.-X., Wang, Q.-Z., Sun, C., Sylvia, S., Rozelle, S. & Raat, H. (2020). Epidemiology, causes, clinical manifestation and diagnosis, prevention and control of coronavirus disease (COVID-19) during the early outbreak period: a scoping review. *Infectious Diseases of Poverty, 9*: 1–12.

Amare, M., Abay, K. A., Tiberti, L. & Chamberlin, J. (2020). *Impacts of COVID-19 on food security: Panel data evidence from Nigeria*. Washington, DC: International Food Policy Research Institute (IFPRI).

Anderson, R. M., Heesterbeek, H., Klinkenberg, D. & Hollingsworth, T. D. (2020). How will country-based mitigation measures influence the course of the COVID-19 epidemic? *The Lancet, 395*: 931–934.

Braveman, P. & Gruskin, S. (2003). Defining equity in health. *Journal of Epidemiology and Community Health*, *57*(4): 254–258

Capano, G., Howlett, M., Jarvis, D. S., Ramesh, M. & Goyal, N. (2020). Mobilizing policy (in) capacity to fight COVID-19: Understanding variations in state responses. *Policy and Society, 39*: 285–308.

Carlitz, R. D. & Makhura, M. N. (2020). Life under lockdown: Illustrating tradeoffs in South Africa's response to COVID-19. *World Development, 137*(202101): 105168.

Caruso, P., Longo, M., Signoriello, S., Gicchino, M., Maiorino, M. I., Bellastella, G., Chiodini, P., Giugliano, D. & Esposito, K. (2020). Diabetic foot problems during the COVID-19 pandemic in a tertiary care center: The emergency among the emergencies. *Diabetes Care, 43*: e123–e124.

Casale, D. & Posel, D. (2021). Gender inequality and the COVID-19 crisis: Evidence from a large national survey during South Africa's lockdown. *Research in Social Stratification and Mobility*, *71*: 100569.

Central Statistical Agency. (2016). Ethiopia. The World Factbook [online]. https://www.cia.gov/the-world-factbook/countries/ethiopia/

Central Statistics Agency. (2020). Ethiopia. COVID-19 High Frequency Phone Survey of Households 2020 World Bank LSMS Harmonized Dataset https://microdata.worldbank.org/index.php/catalog/4072

Cilliers, J., Oosthuizen, M., Kwasi, S., Alexander, K., Pooe, T., Yeboua, K. & Moyer, J. D. (2020). *Impact of COVID-19 in Africa: A scenario analysis to 2030.* ISS Africa Report 2020, no. 24. Pretoria, South Africa: Institute for Security Studies (ISS).

CIPE. (2020). *Responding to the COVID-19 pandemic in Ethiopia:The private sector experience*. Centre for International and Private Enterprise (CIPE).

Colao, A., Piscitelli, P., Pulimeno, M., Colazzo, S., Miani, A. & Giannini, S. (2020). Rethinking the role of the school after COVID-19. *The Lancet Public Health, 5*: e370.

Couch, K. A., Fairlie, R. W. & Xu, H. (2020). Early evidence of the impacts of COVID-19 on minority unemployment. *Journal of Public Economics, 192*: 104287.

Craig, J., Kalanxhi, E., Gilbert, O. & Frost, I. (2020). Estimating critical care capacity needs and gaps in Africa during the COVID-19 pandemic (Preprint). *MedRxiv, 06*: 20120147.

De Aranzabal, M., Fumadó, V., Alegria, I., Rivera, M., Torre, N., Guibert, B., Moraleda, C. & Bassat, Q. (2020). COVID-19 and Africa: Surviving between a rock and a hard place. *Anales de Pediatría (English Edition), 93*(6): 420.e1–420.e6.

Degye, G., Mengistu, K., Getachew, D. & Tadele, F. (2020). *Assessment of COVID-19 effects and response measures in Ethiopia: Livelihoods and welfare implications.* Policy Working Paper 04/2020. Addis Ababa: Ethiopian Economics Association.

Deressa, T. T. (2007). *Measuring the economic impact of climate change on Ethiopian agriculture.* World Bank Publications.

Egunjobi, J. P. (2020). *The perception of COVID-19 as a fear factor in the preparation for the pandemic aftermath.* Nairobi, p. 10.

Ejeromedoghene, O., Tesi, J. N., Uyanga, V. A., Adebayo, A. O., Nwosisib, M. C., Tesi, G. O. & Akinyeye, R. O. (2020). Food security and safety concerns in animal production and public health issues in Africa: A perspective of COVID-19 pandemic era. *Ethics, Medicine and Public Health, 15*: 100600.

Ekumah, B., Armah, F. A., Yawson, D. O., Quansah, R., Nyieku, F. E., Owusu, S. A., Odoi, J. O. & Afitiri, A.-R. (2020). Disparate on-site access to water, sanitation, and food storage heighten the risk of COVID-19 spread in Sub-Saharan Africa. *Environmental Research, 189*: 109936.

Elsahoryi, N., Al-Sayyed, H., Odeh, M., Mcgrattan, A. & Hammad, F. (2020). Effect of COVID-19 on food security: A cross-sectional survey. *Clinical Nutrition ESPEN, 40*: 171–178.

Emirie, G., Iyasu, A., Gezahegne, K., Jones, N., Presler-Marshall, E., Tilahun, K., Workneh, F. & Yadete, W. (2020). *Experiences of vulnerable urban youth under COVID-19: The case of youth with disabilities.* Policy brief: COVID-19 Series. Ethiopia, London: Gender and Adolescence: Global Evidence (GAGE).

Ezeh, C., Monkam, P., Amatus, G., Magoua, J. J., Namusamba, M. & Babuna, P. (2020). Africa's response mechanisms to the ramification of COVID-19. *Preprints* 2020, 2020110639. doi: 10.20944/preprints202011.0639.v1.

Ferreira, F. H. & Walton, M. (2005). *World development report 2006: Equity and development*. World Bank Publications.

Food and Agriclutre Organization (FAO), International Fund for Agricultural Development (IFAD), United Nations Children's Fund (UNICEF), World Food Programme (WFP) & WHO. (2019). *The state of food security and nutrition in the world 2019. Safeguarding against economic slowdowns and downturns.* Rome: FAO.

GeoPoll. (2020). *The financial impact of Coronavirus in Sub-Sharan Africa*. https://f.hubspotusercontent30.net/hubfs/325431/Financial%20Impact%20of%20COVID%20Report_Final.pdf?utm_campaign=Financial%20Impact%20Report&utm_medium=email&_hsmi=91853058&_hsenc=p2ANqtz-9I-7gud9j8SP2GpZYrz0-uf1UIWAN4rE013TF_xNLVScfBDuG2rzlKe9GcPp_7hBKuEK.

Getaneh, Y., Yizengaw, A., Adane, S., Zealiyas, K., Abate, Z., Leulseged, S., Desalegn, H., Yimer, G. & Abate, E. (2020). Global lessons and potential strategies in combating COVID-19 pandemic in Ethiopia: Systematic Review. *Clinical Oncology and Research*, (20200807): 1–7.

Goshu, D., Ketema, M., Diriba, G. & Ferede, T. (2020). *Assessment of COVID-19 effects and response measures in Ethiopia: Livelihoods and welfare implications.* Addis Ababa: Ethiopian Economics Association.

Government of Ethiopia. (2020). *Proclamation No. 3/320 State of emergency proclamation enacted to counter and control the spread of COVID-19 and mitigate its Impact*. Addis Ababa: Federal Democratic Republic of Ethiopia (FDRE).

Gudi, S. K. & Tiwari, K. K. (2020). Preparedness and lessons learned from the novel coronavirus disease. *The International Journal of Occupational and Environmental Medicine, 11*: 108.

Güner, H. R., Hasanoğlu, İ. & Aktaş, F. (2020). COVID-19: Prevention and control measures in community. *Turkish Journal of Medical Sciences, 50***:** 571–577.

Hai, W., Zhao, Z., Wang, J. & Hou, Z.-G. (2004). The short-term impact of SARS on the Chinese economy. *Asian Econ, 3*: 57–61.

Hale, T., Webster, S., Petherick, A., Phillips, T., & Kira, B. (2020). *Oxford COVID-19 government response tracker*. Blavatnik School of Government.

Hu, D., Lou, X., Xu, Z., Meng, N., Xie, Q., Zhang, M., Zou, Y., Liu, J., Sun, G. & Wang, F. (2020). More effective strategies are required to strengthen public awareness of COVID-19: Evidence from Google Trends. *Journal of Global Health,* 10.

ILO. (2020). *Employment by sex and age — ILO modelled estimates*. ILOSTAT, International Labour Organization (ILO). https://ilostat.ilo.org/data (Accessed 14 February 2020).

ILO Monitor. (2020). *COVID-19 and the world of work. Seventh edition. Updated estimates and analysis*. International Labour Organization (ILO) Monitor. https://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/documents/briefingnote/wcms_767028.pdf

Iranpour, P., Firoozi, H. & Haseli, S. (2020). Methanol poisoning emerging as the result of COVID-19 outbreak; radiologic perspective. *Academic Radiology, 27*: 755–756.

Kaleab, B. (2020). *COVID-19 prevention measures in Ethiopia: Current realities and prospects*. Addis Ababa: International Food Policy Research Institute (IFPRI) and Federal Democratic Republic of Ethiopia (FDRE)

Kansiime, M. K., Tambo, J. A., Mugambi, I., Bundi, M., Kara, A. & Owuor, C. (2021). COVID-19 implications on household income and food security in Kenya and Uganda: Findings from a rapid assessment. *World Development, 137*: 105199.

Kim, A. T., Kim, C. H., Tuttle, S. E. & Zhang, Y. (2021). COVID-19 and the decline in Asian American employment. *Research in Social Stratification and Mobility, 71***:** 100563.

Kithiia, J., Wanyonyi, I., Maina, J., Jefwa, T. & Gamoyo, M. (2020). The socio-economic impacts of COVID-19 restrictions: Data from the coastal city of Mombasa, Kenya. *Data in Brief, 33*: 106317.

Köhler, T. & Bhorat, H. (2020). C*OVID-19, social protection and the labour market in South Africa: Are social grants being targeted at the most vulnerable?* DPRU Working Paper 202008. Development Policy Research Unit (DPRU), University of Cape Town.

Lebrasseur, A., Fortin-B'edard, N. E., Lettre, J., Bussi'eres, E.-L., Best, K., Boucher, N., Hotton, M., Beaulieu-Bonneau, S., Mercier, C., Lamontagne, M.-E. & Routhier, F. (2020). Impact of COVID-19 on people with physical disabilities: A rapid review. *Disability and Health Journal, 14*(1).

Loembé, M. M., Tshangela, A., Salyer, S. J., Varma, J. K., Ouma, A. E. O. & Nkengasong, J. N. (2020). COVID-19 in Africa: the spread and response. *Nature Medicine, 26*: 999–1003.

Lytras, T. & Tsiodras, S. (2020). Lockdowns and the COVID-19 pandemic: What is the endgame? *Scandinavian Journal of Public Health*.

Masbah, M. & Jacobs, A. (2020). Can Morocco effectively handle the COVID-19 crisis [online]. Chatham House (blog), 6 April 2020. https://www.chathamhouse.org/2020/04/can-morocco-effectively-handle-covid-19-crisis.

Mayr, V., Nußbaumer-Streit, B. & Gartlehner, G. (2020). Quarantine alone or in combination with other public health measures to control COVID-19: A rapid review. *Gesundheitswesen (Bundesverband der Arzte des Offentlichen Gesundheitsdienstes (Germany), 82*: 501–506.

Mbunge, E. (2020). Effects of COVID-19 in South African health system and society: An explanatory study. *Diabetes & Metabolic Syndrome: Clinical Research & Reviews, 14*: 1809e1814.

Mengistu, A., Krishnan, P., Maaskant, K., Meyer, C. J. & Krkoska, E. (2020). *Firms in Ethiopia's industrial parks: COVID-19 impacts, challenges, and government response.* World Bank.

Ministry of Education. (2020). *Ministry of Education concept note for education sector COVID 19-preparedness and response plan.* Addis Ababa: Ministry of Education, Ethiopia.

Ministry of Health. (2015). *Ethiopian Health Sector Transformation Plan, 2015/16–2019/20*. Addis Ababa: Federal Democratic Republic of Ethiopia.
Modi, P. D., Nair, G., Uppe, A., Modi, J., Tuppekar, B., Gharpure, A. S. & Langade, D. (2020). COVID-19 awareness among healthcare students and professionals in Mumbai metropolitan region: A questionnaire-based survey. *Cureus,* 12.
Mohammed, H., Oljira, L., Roba, K. T., Yimer, G., Fekadu, A. & Manyazewal, T. (2020). Containment of COVID-19 in Ethiopia and implications for tuberculosis care and research. *Infectious Diseases of Poverty, 9*: 1–8.
NBE. (2019). *Annual report of 2018/2019*. Addis Ababa: National Bank of Ethiopia. https://nbebank.com/annual-report/.
Nicola, M., O'Neill, N., Sohrabi, C., Khan, M., Agha, M. & Agha, R. (2020). Evidence based management guideline for the COVID-19 pandemic-review article. *International Journal of Surgery, 77*(202005): 206–216.
Nkengasong, J. N. & Mankoula, W. (2020). Looming threat of COVID-19 infection in Africa: Act collectively, and fast. *The Lancet, 395*: 841–842.
OECD. (2020a). *Coronavirus (COVID-19): SME policy responses*. Organisation for Economic Co-operation and Development (OECD). https://www.oecd.org/coronavirus/policy-responses/coronavirus-covid-19-sme-policy-responses-04440101/
OECD (2020b). OECD country policy tracker [online]. Organisation for Economic Co-operation and Development (OECD). https://www.oecd.org/coronavirus/en/.
Okoi, O. & Bwawa, T. (2020). How health inequality affect responses to the COVID-19 pandemic in Sub-Saharan Africa. *World Development, 135*: 105067.
Osseni, I. A. (2020). COVID-19 pandemic in Sub-Saharan Africa: Preparedness, response, and hidden potentials. *Tropical Medicine and Health,* 48: 1–3.
Palese, P. (2004.) The great influenza. The epic STORY of the deadliest plague in history. *Journal of Clinical Investigation,* 114: 146.
Pang, J., Wang, M. X., Ang, I. Y. H., Tan, S. H. X., Lewis, R. F., Chen, J. I.-P., Gutierrez, R. A., Gwee, S. X. W., Chua, P. E. Y. & Yang, Q. (2020). Potential rapid diagnostics, vaccine and therapeutics for 2019 novel coronavirus (2019-nCoV): A systematic review. *Journal of Clinical Medicine, 9*: 623.
Peiris, J. S. M., Yuen, K. Y., Osterhaus, A. D. M. E. & Stöhr, K. (2003). The severe acute respiratory syndrome. *New England Journal of Medicine, 349*: 2431–2441.
Salzberger, B., Glück, T. & Ehrenstein, B. (2020). Successful containment of COVID-19: The WHO-report on the COVID-19 outbreak in China. *Infection*, *48*(2): 151–153.
Sers, C. F. & Mughal, M. (2020). COVID-19 outbreak and the need for rice selfsufficiency in West Africa. *World Development, 135*: 105071.
Shehzada, K., Xiaoxinga, L. & Kazouzb, H. (2020). COVID-19's disasters are perilous than Global Financial Crisis: A rumor or fact? *Finance Research Letters, 36*: 101669.
Sjödin, H., Wilder-Smith, A., Osman, S., Farooq, Z. & Rocklöv, J. (2020). Only strict quarantine measures can curb the coronavirus disease (COVID-19) outbreak in Italy, 2020. *Eurosurveillance, 25*: 2000280.
Starr, N., Panda, N., Johansen, E., Forrester, J., Wayessa, E., Rebollo, D., August, A., Fernandez, K., Bitew, S. & Mammo, T. N. (2020). The lifebox surgical headlight project: Engineering, testing, and field assessment in a resource-constrained setting. *British Journal of Surgery, 107*: 1751–1761.
Statista. (2020). Ethiopia: Total population from 2009 to 2019, by gender [online]. https://www.statista.com/statistics/967834/total-population-of-ethiopia-by-gender/
Stuckler, D., Reeves, A., Loopstra, R., Karanikolos, M. & Mckee, M. (2017). Austerity and health: The impact in the UK and Europe. *European Journal of Public Health, 27*: 18–21.

Taddesse, L. (2020). *Solidarity, agility and continuity: Three cornerstones of Ethiopia's COVID-19 response.* Think Global Health.
Udmale, P., Pal, I., Szabo, S., Pramanika, M. & Largec, A. (2020). Global food security in the context of COVID-19: A scenario-based exploratory analysis. *Progress in Disaster Science, 7*: 100120.
United Nations (2019). *World population prospects 2019* [online edition]. Department of Economic and Social Affairs, Population Division. New York City: United Nations.
Wadvalla, B. (2020). How Africa has tackled COVID-19. *British Medical Journal, 370*: 2830.
Wang, J. & Wang, Z. (2020). Strengths, weaknesses, opportunities and threats (SWOT) analysis of China's prevention and control strategy for the COVID-19 epidemic. *International Journal of Environmental Research and Public Health, 17*: 2235.
Wang, L.-S., Wang, Y.-R., Ye, D.-W. & Liu, Q.-Q. (2020). A review of the 2019 Novel Coronavirus (COVID-19) based on current evidence. *International Journal of Antimicrobial Agents*, 105948.
Watkins, J. (2020). Preventing a COVID-19 pandemic. We need to think beyond containment. *British Medical Journal, 368*: m810.
WHO. (2020a). *Coronavirus disease 2019 (COVID-19): Situation report*, 72. World Health Organization. https://www.who.int/emergencies/diseases/novel-coronavirus-2019/situation-reports
WHO. (2020b). Over 10 000 health workers in Africa infected with COVID-19 [online]. World Health Organization. https://www.afro.who.int/news/over-10-000-health-workers-africa-infected-covid-19. (Accessed 26 July 2020).
WHO. (2020c). Pa*ss the message: Five steps to kicking out coronavirus*. Geneva: World Health Organization.
Wilder-Smith, A. & Freedman, D. O. (2020). Isolation, quarantine, social distancing and community containment: Pivotal role for old-style public health measures in the novel coronavirus (2019-nCoV) outbreak. *Journal of Travel Medicine,* 27: taaa020.
World Bank. (2019). *World development indicators*. New York: World Bank.
Worldometer. (2021). Countries in the world by population (2020) [online]. Worldometers.info. https://www.worldometers.info/world-population/population-by-country/
Wu, Z. & McGoogan, J. M. (2020). Characteristics of and important lessons from the coronavirus disease 2019 (COVID-19) outbreak in China: Summary of a report of 72,314 cases from the Chinese Center for Disease Control and Prevention. *Jama,* 323: 1239–1242.
Yoshikawa, H., Wuermli, A. J., Britto, P. R., Dreyer, B., Leckman, J. F., Lye, S. J., Ponguta, L. A., Richter, L. M. & Stein, A. (2020). Effects of the global coronavirus disease-2019 pandemic on early childhood development: Short-and long-term risks and mitigating program and policy actions. *The Journal of Pediatrics,* 223: 188–193.
Zvobgo, L. & Do, P. (2020). COVID-19 and the call for 'safe hands': Challenges facing the under-resourced municipalities that lack potable water access. A case study of Chitungwiza municipality, Zimbabwe. *Water Research X, 9:* 100074.

Annex

Table A1(a). Economic measures

Institution	Policy response
World Bank	Announced the availability of US$160 billion, which will be available to countries until late 2021. The package is set to enhance the ability of beneficiary economies to ease the effects of COVID-19 on small businesses and the vulnerable populations.
African Development Bank (AfDB)	The AfDB has a US$10 billion COVID-19 response package in the pipeline, of which US$5.5 billion is set for its sovereign operations in AfDB countries and US$3.1 billion is for operations under the African Development Fund. AfDB has also launched a US$3 billion fight COVID-19 social bond, which was allocated to central banks and official institutions: (53%), bank treasuries (27%) and asset managers (20%). Notably, 8% of this social bond is set aside for African countries.
International Monetary Fund (IMF)	The IMF has approved US$2.7 billion for COVID-19 related emergency responses in African countries.
European Union (EU)	The EU announced a Euro 3.25 billion COVID-19 toolkit for African countries.
Afreximbank	The Afreximbank announced a US$3 billion Pandemic Trade Impact Mitigation Facility (PATIMFA) to enhance the capacity of African countries to deal with COVID-19 related health and economic impacts. In addition, the bank set aside US$200 million to finance the production of COVID-19 equipment and supplies within Africa.

Source: (Ezeh et al., 2020)

Table A1(b). Economic policy measures

Area	Measure	Institution
Tax	Forgiveness of all tax debt prior to 2014/2015	MoR
Tax	Tax amnesty on interest and penalties for tax debt pertaining to 2015/2016–2018/2019	MoR
Tax	Rental tax waiver	MoR
Tax	Four-month income tax waiver for workers staying at home	MoR
Tax	Extend payment period for VAT and turnover tax	MoR
Tax	Tax deduction on COVID-related charitable donations	MoR
Tax	Loss carried forward	MoR
Tax	Tax exemption for COVID-19 PPE imports	ECC
Tax	Expedite VAT returns	MoR
Tax	Removal of import taxes for raw materials for COVID-19 PPE	ECC
Loan/credit	Loan and credit support for small and micro enterprises	DBE
Loan/credit	Allow banks to renegotiate, refinance and reschedule of loans and advances	DBE
Loan/credit	ETB 15 billion liquidity injection to private banks	DBE

Loan/credit	ETB 33 billion liquidity injection to CBE	DBE
Banking	Make available foreign exchange rate for COVID-19 PPE	Private banks
Banking	Mobile banking limit increase	CBE
Market	Domestic market access for export manufacturers	EIC
Industrial parks	Postpone rental payments and service charges	IPDC
Prices	Removal of minimum price set on flowers	NBE
Prices	Control prices of consumer goods	MoTI
Logistics	Reduced (or zero) prices for train and freight transport costs	MoT
Logistics	No terminal charges in Djibouti	DPFZA
Labour	Deferral of private pension contributions	POESSA
Labour	Prohibition on laying off employees	FAG
Note: MoR = Ministry of Revenue; ECC = Ethiopian Customs Commission; DBE = Development Bank of Ethiopia; NBE = National Bank of Ethiopia; CBE = Commercial Bank of Ethiopia; EIC = Ethiopian Investment Commission; IPDC = Industrial Parks Development Corporation; MoTI = Ministry of Trade and Industry; MoT = Ministry of Transport; DPFZA = Djibouti Ports and Free Zones Authority; POESSA = Private Organizations' Employees Social Security Agency; FAG = Federal Attorney General		

Source: (Mengistu et al., 2020)

Table A2. Public health interventions

Core activities	**Progressive measures taken to combat the COVID-19**
Public gatherings suspended	On 16 March 2020,the government limited public gatherings including gatherings for religious practices, sporting events, and concerts, ordered school closure, and ordered high-risk civil servants to work from home. The government preferred daily activities to continue, but with containment measures.
Transport restricted	Taxis and mass transport services were restricted to abide by the new rules about working time and to provide services with half of their load capacity. The nine regional states and two city administrations imposed travel restrictions.
Flights suspended	Ethiopia suspended flights to 30 countries affected by the virus on 23 March 2020 and this was extended to more than 80 countries on 29 March 2020.
Land borders closed	Ethiopia closed all land borders and deployed security forces on 23 March 2020.
Pardon for prisoners	A total of 20,402 prisoners were granted pardons to prevent the spread of the disease in prison.
Election postponed	Over COVID-19 fears, the Ethiopian government officially postponed parliamentary and presidential elections, which were supposed to be held on 29 August 2020.
State of Emergency declared	Considering the progressive rise of cases in the country, the government declared a five-month national state of emergency on 8 April 2020.
Political parties participated	On 5 April 2020, the Prime Minister, Dr Abiy Ahmed, officially met with leaders of competing political parties to discuss and reach consensus on the effect and containment of COVID-19.

Religious leaders participated	The Ethiopian Religious Council, which draws its members from various religious institutions in the country, declared a one-month prayer programme from 6 April to 5 May 2020 and this was televised live. Religious leaders had announced ahead of time for worshipers to avoid going to churches and mosques, but to pray at home.
Media informed the public	Different national multimedia outlets and billboards massively disseminated facts and educational information to create awareness and deliver up-to-date information about COVID-19. Ethio-telecom used cell-phone ring tones to remind people of the importance of hygiene measures.
International collaborations harnessed	The country engaged in international collaborations to fighting the pandemic. Prime Minister Dr Abiy Ahmed and the Chinese organizations Jack Ma and Ali Baba Foundation initiated the 'PM Abiy-Jack Ma' initiative to support African countries with COVID-19 diagnostics and infection prevention control commodities on 17 March 2020. Ethiopian Airlines distributed COVID-19 supplies donated by the Jack Ma to African Union Member States and the African Union's Center for Disease Control and Prevention provided technical guidelines. The commodities included millions of test kits, masks, and protective suits.
Regular information dissemination	The Ethiopian Federal Ministry of Health and its technical arm, the Ethiopian Public health Institute, established an active surveillance mechanism, as per WHO recommendations, to regularly check the status of the disease in the population and disseminate information. The number of tests performed, cases confirmed, and cases recovered are reported each day by Dr Lia Taddesse, Federal Minister of Health. This has been the most reliable source of information.

Source: (Mohammed et al., 2020)

Table A3. Policy measures by Ethiopia

Indicators			**Responses**
COVID-19 Government Response Stringency Index	0.00 on 22 January 2020	51.85 on 28 November 2020	This is a composite measure based on nine response indicators including school closures, workplace closures, and travel bans, rescaled to a value from 0 to 100 (100 = strictest). If policies vary at the sub-national level, the index is shown as the response level of the strictest sub-region.
Containment and Health Index	0.00 on 1 January 2020	56.25 on 28 November 2020	This is a composite measure based on 11 policy response indicators including school closures, workplace closures, travel bans, testing policy, and contact tracing, rescaled to a value from 0 to 100 (100 = strictest). If policies vary at the sub-national level, the index is shown as the response level of the strictest sub-region.

Schools closures	0.00 on 22 January 2020	1.00 on 28 November 2020	Note that there may be sub-national or regional differences in policies on school closures. The policy categories shown may not apply at all sub-national levels. A country is coded as 'required closures' if at least some sub-national regions have required closures.
Workplaces closures	0.00 on 1 January 2020	1.00 on 28 November 2020	
Cancellation of public events	0.00 on 1 January 2020	1.00 on 28 November 2020	
Restrictions on public gatherings	0.00 on 1 January 2020	3.00 on 28 November 2020	Countries are grouped into five categories: No restrictions; restrictions on very large gatherings (the limit is above 1,000 people); restrictions on gatherings between 100 to 1,000 people; restrictions on gatherings
Stay at home restrictions	0.00 on January 2020	0.00 on 28 November 2020	This interactive chart maps government policies on stay-at-home requirements or household lockdowns. Countries are grouped into four categories: No measures; recommended not to leave the house; required to not leave the house with exceptions for daily exercise, grocery shopping, and 'essential' trips; required to not leave the house with
Face covering policies	0.00 on 1 January 2020	3.00 on November 2020	This interactive chart maps government policies on the use of face coverings outside-of-the-home. Countries are grouped into five categories: No policy; recommended; required in some specified shared/public spaces outside the home with other people present, or some situations when social distancing not possible; required in all shared/public spaces outside the home with other people present or all situations when social distancing not possible; required outside the home at all times regardless of location or presence of other people. Note that there may be sub-national or regional differences in policies on face coverings. The policy categories shown may not apply at all sub-national levels. A country is coded based on its most stringent policy at the sub-national level.

Public information campaigns	0.00 on 1 January 2020	2.00 on 28 November 2020	This interactive chart maps public information campaigns on COVID-19. The OxCGRT is missing data for many countries at level 1 'public officials urging caution about COVID-19', and so most countries only have data for levels 0 and 2.
Public support	0.00 on 1 January 2020	1.00 on 28 November 2020	
Restrictions on internal movement	0.00 on 1 January 2020	2.00 on 28 November 2020	
International travel control	0.00 on 1 January 2020	2.00 on 28 November 2020	
Testing policy	0.00 on 1 January 2020	1.00 on 28 November 2020	– No testing policy – Only those who both (a) have symptoms and also (b) meet specific criteria (e.g. key workers, admitted to hospital, came into contact with a known case, returned from overseas) – Testing of anyone showing COVID-19 symptoms – Open public testing (e.g. 'drive through' testing available to asymptomatic people)
Contact tracing	0.00 on 1 January 2020	2.00 on 28 November 2020	'Limited' contact tracing means some, but not all, cases are traced. 'Comprehensive' tracing means all cases are traced.
Income support	0.00 on 1 January 2020	0.00 on 28 November 2020	Income support captures if the government is covering salaries or providing direct cash payments, universal basic income, or similar, for people who have lost their jobs or cannot work.
Debt and contract relief	0.00 on 1 January 2020	0.00 on 28 November 2020	Debt or contract relief captures if the government is freezing financial obligations during the COVID-19 pandemic, such as stopping loan repayments, preventing services like water from being stopped, or banning evictions.

Source: Hale et al. (2020)

Table A4. Financial contribution by private institutions

No	**Name of business**	**Contribution** (ETB)
1	MIDROC Technology Group	10.8 million

2	Dashen Bank	10 million
3	Awash Bank	10 million
4	Oromia Int'l Bank	5 million
5	Awash Insurance	3 million
6	Abay Bank	3 million
7	Heinkien Ethiopia	3 million
8	Debub Global Bank	2 million
9	Hora Trading	1 million
10	Tracon Trading	1 million
11	Santamaria Trading	1 million
12	Afro Tsion Construction	1 million
13	Steely RMI Plc	1 million
14	Century Mall	1 million
15	Mekab Plc	1 million
16	Nile Sources Plc	1 million
17	Amaga Plc	1 million
18	Romina Plc	600,000
19	Belay Ab Motors	500,000
20	Family Modern Trading	500,000
21	Markos Plc	500,000
22	Central Printing Press	330,000
23	Moya Food Complex	330,000
24	Miheretab Leul and Associates Law Office	100,000
25	Tinsea Real Estate	100,000
26	Yonas Mobile	10,000
27	Addis Mela Plc	70,000
	TOTAL	58.04 million

Table A5. Business enterprises that have responded to national demand

No	Enterprise	Product/services
1	Calzedonia Textile Factory	Face masks
2	Julphar PharmaceuticalPlc	Hand sanitizer
3	Shints ETP Garment Plc	Face masks
4	Sansheng PharmaceuticalsPlc	Hand sanitizer
5	NASA Garment Plc	Face masks
6	Ethio Asian Plc	Hand sanitizer
7	EPHARM	Hand sanitizer
8	Sheba Pharmaceuticals	Hand sanitizer
9	Hujian Group	Face masks
10	Mafi Fashion	Face masks
11	Next Design	Face masks
12	Awash International Bank	Mobile banking
13	Jupiter International Hotel	Food delivery
14	Zay Ride	Taxi hailing

15	Addis Merkato	Delivery service
16	Efoi Pizza	Food delivery
17	Fresh Corner	Food items
18	Amolle	Payment service
19	i-Tutor Ethiopia	Tutor services
20	e-fanos	Education services

Table A6. The role of business membership organizations

BMOs	Responses
ECCSA & AACCSA	The Ethiopian Chamber of Commerce and Sectoral Association (ECCSA) and Addis Ababa Chamber of Commerce & Sectoral Association (AACCSA) involved in public awareness creation via producing a video about COVID-19 and its effect. The organization conducted a survey on the impact of COVID-19 and the outcome has been provided to the government for policy reform.
OCCSA	The Oromia Chamber of Commerce & Sectoral Association (OCCSA) is working closely with the Oromia Regional Government to address the strain the pandemic has put on regional businesses. It has contributed ETB 50,000 to the Regional Resource Mobilization Committee (RRMC) for COVID-19 relief efforts and has organized its members to contribute up to ETB 5 million to the committee.
AWEA	The Amhara Women Entrepreneurs Association (AWEA) has contributed ETB 102,000 to the RRMC. Additionally, AWEA has started discussion with its members to identify the challenges that they face as a result of COVID-19, consolidate the issues, and present them to regional policymakers.
SCCSA	The Sekota Chamber of Commerce & Sectoral Association (SCCSA) has procured 20 infrared thermometers and provided them to the regional government. It is also raising awareness around the risk of COVID-19 among its members by distributing various publications from WHO and providing guidance to members on implementing social distancing measures in their workplaces.
BDCCSA	The Bahir Dar Chamber of Commerce & Sectoral Association (BDCCSA) has contributed ETB 100,000 to the RRMC. The Chamber is also collaborating with Bahir Dar City Administration to mobilize resources and coordinate efforts to contain the spread of the virus.

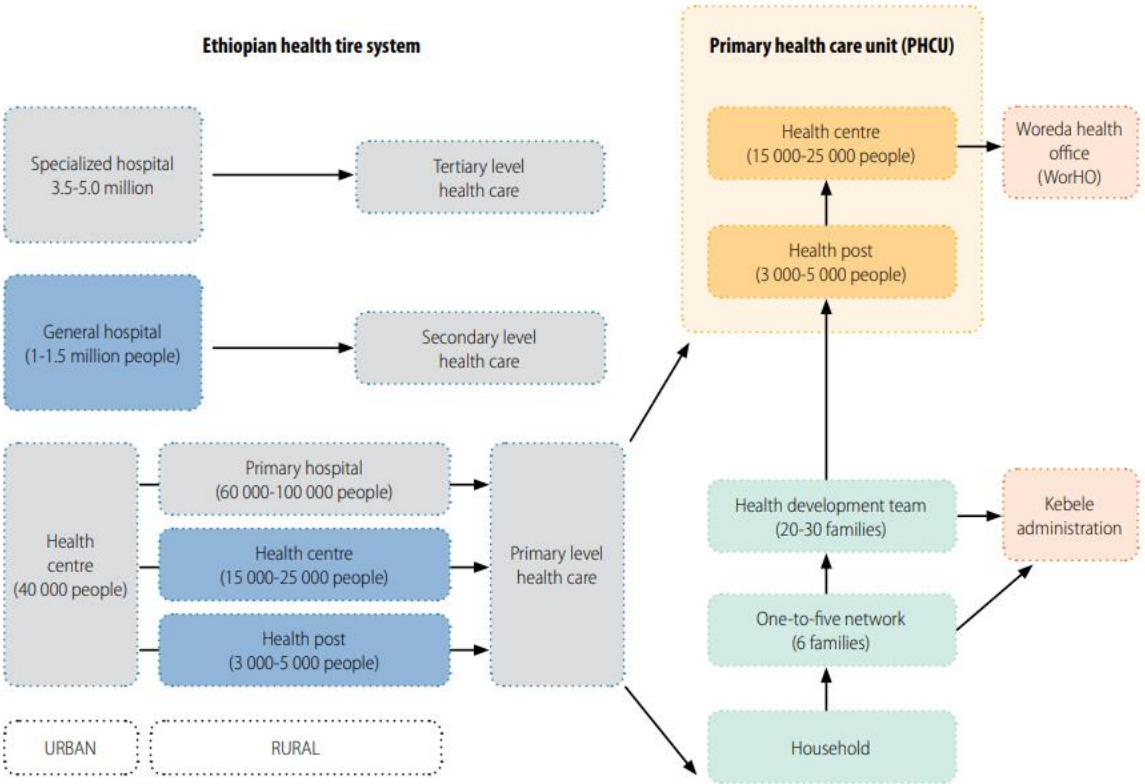
Table A7. Innovations to support public health measures

Country	Innovations
Ghana	Rapid Diagnostic Test (RDT) kit at a relatively low price, solar powered hand-washing basin, mobile apps for check-up and monitoring, drones for medical supplies and medical care
Senegal	$1 test kit, robot doctors, mobile apps for check-up and monitoring
Kenya	Cost-effective ventilators, semi-automatic wooden hand washing machine, surgical mask
Ethiopia	Cost-effective ventilators, portable washbasins, mobile apps for check-up and monitoring
Uganda	Cost-effective ventilators
Nigeria	Cost-effective ventilators

Rwanda	Portable washbasins, high-tech robots for patient monitoring, drones for medical supplies and medical care
Madagascar	Herbal medicine
South Africa	Cost-effective ventilators, mobile apps for check-up and monitoring

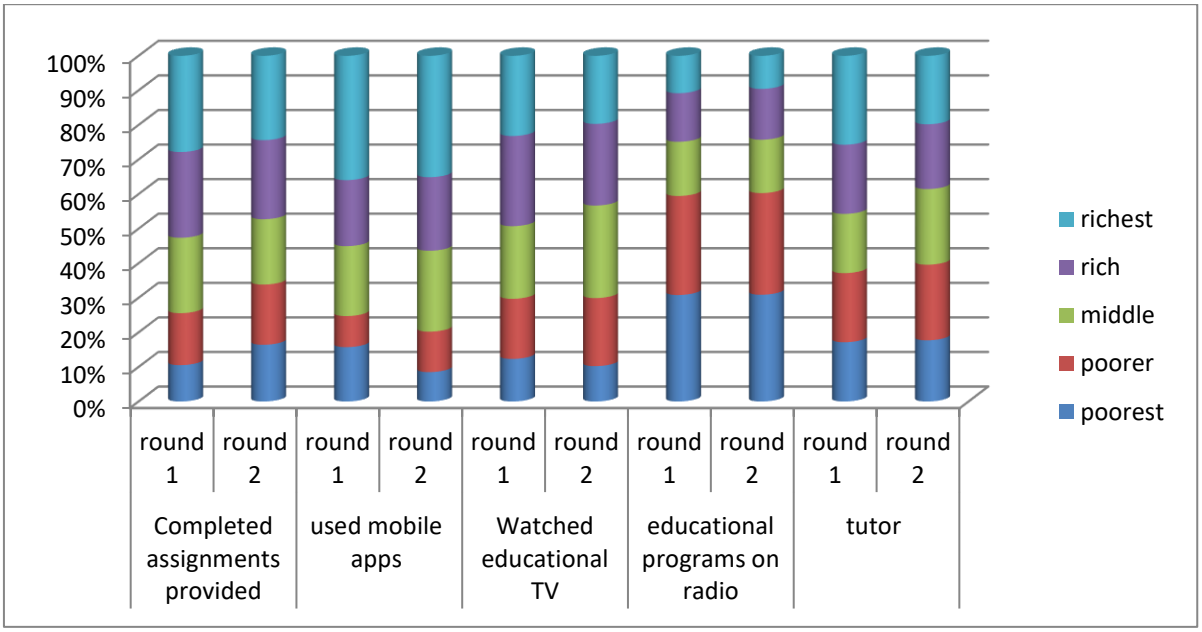
Source: (Ezeh et al., 2020)

Figure A1. Structure of Ethiopia's healthcare system



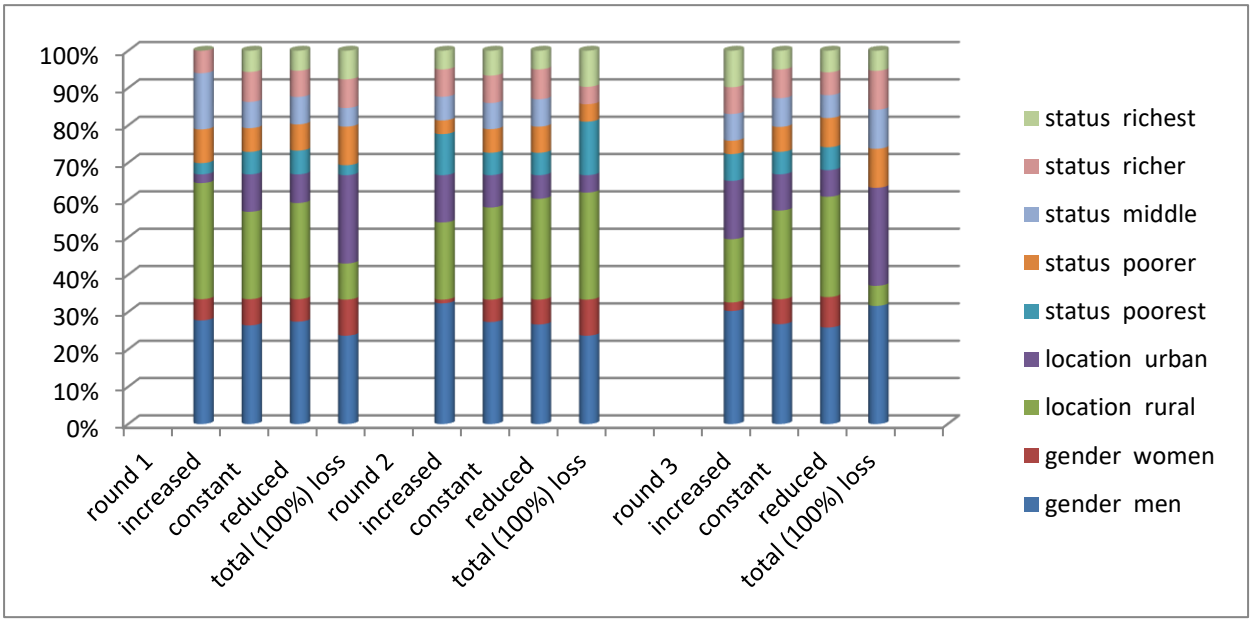
Source: Ministry of Health (2015)

Figure A2. Education strategies to respond to the pandemic by socioeconomic status



Source: World Bank (2020) survey
Note: 'Round refers to World Bank survey period (round 1: 22 April to 13 May 2020; round 2: 14 May to 3 June2020; round 3: 4 to 26 June 2020)

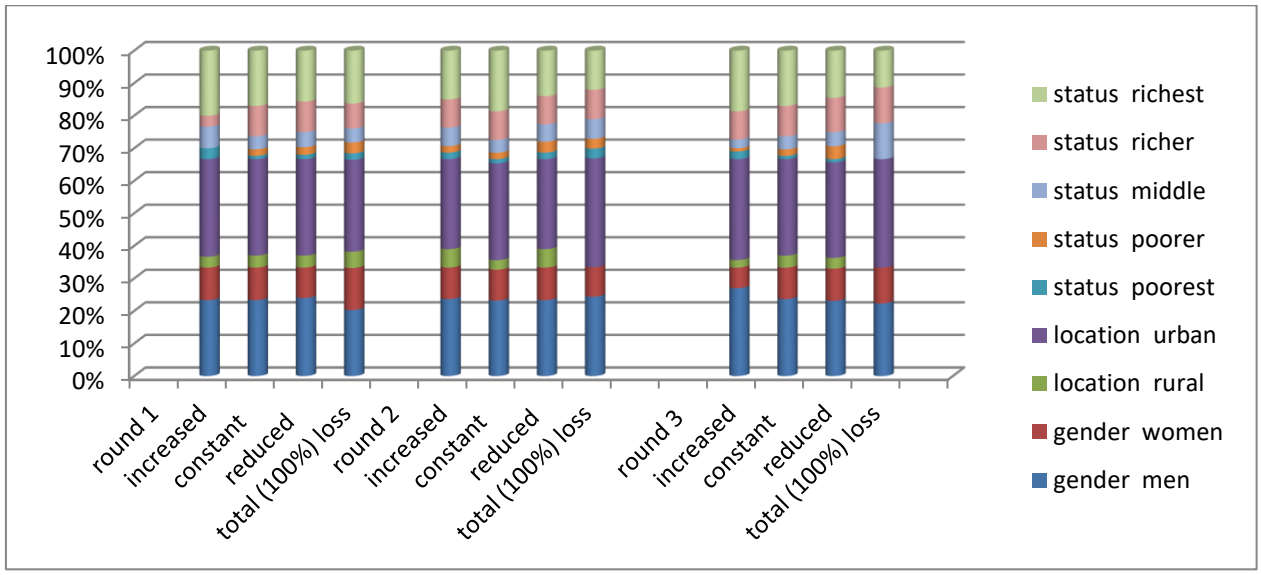
Figure A3. Agricultural income change due to the pandemic response



Source: World Bank (2020) survey

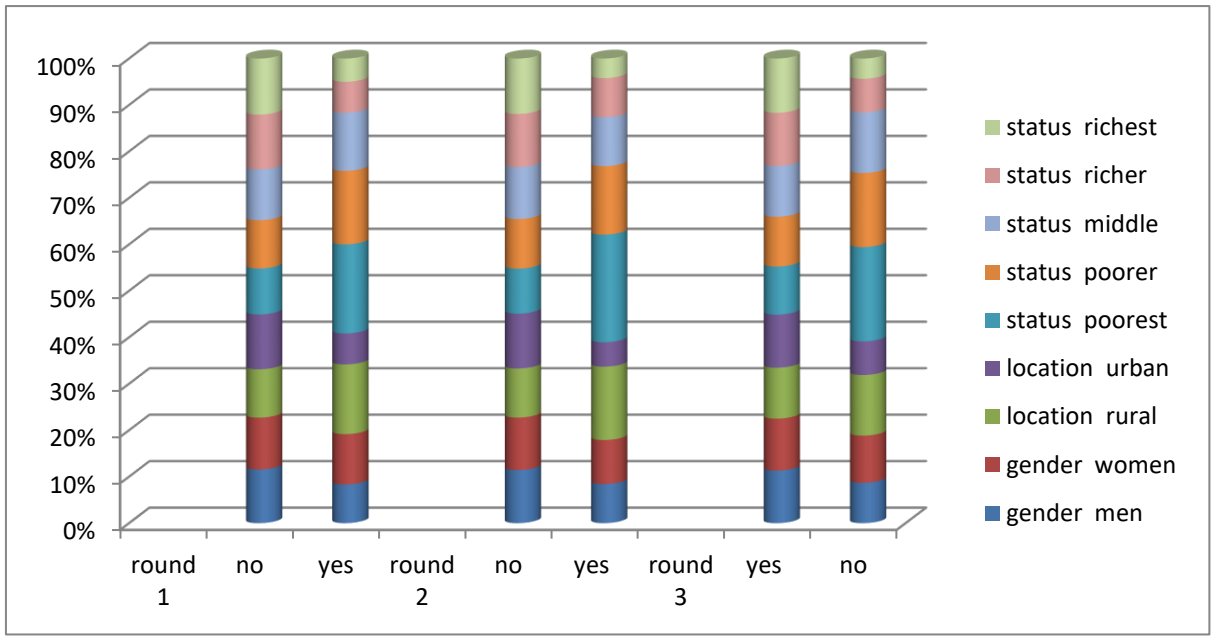
Note: ‘Round refers to World Bank survey period (round 1: 22 April to 13 May 2020; round 2: 14 May to 3 June2020; round 3: 4 to 26 June 2020)

Figure A4. Impact of the response to pandemic on income from wage employment



Source: World Bank (2020) survey
Note: ‘Round refers to World Bank survey period (round 1: 22 April to 13 May 2020; round 2: 14 May to 3 June2020; round 3: 4 to 26 June 2020)

Figure A5. People who were hungry, did not eat for a full day due to lack of resource following response to the pandemic



Source: World Bank (2020) survey

Note: ‘Round refers to World Bank survey period (round 1: 22 April to 13 May 2020; round 2: 14 May to 3 June2020; round 3: 4 to 26 June 2020)