The Short-term Impact of COVID-19 on Ethiopia's Economy through External Sector Channels

An economywide multiplier model analysis

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ABSTRACT

The COVID-19 pandemic is expected to considerably affect the Ethiopian economy directly and indirectly due to global shocks and to the different restrictive preventative measures the country is taking. We analyze these economic effects using multisector economywide income multiplier models built on the two latest Social Accounting Matrices (SAMs) developed for Ethiopia. Three external sector channels are the focus of the analysis: commodity exports, strategic imports, and remittances. Results indicate that in the absence of any policy responses, the Ethiopian economy is expected to experience a loss of approximately 4.3 to 5.5 percent of its annual GDP due to exports, strategic imports, and remittances that are one-third lower relative to the no-COVID situation over a period of six-months. This translates into estimated reductions in labor income of between 4.2 and 5.2 percent. The SAM multiplier model estimates also imply that these negative shocks lead to household income losses that amount to between 3.9 and 6.4 percent. In particular, the urban poor will be the most affected as they lose real incomes in the range of 6.6 to 8.5 percent. These income losses are estimated to result in a 3.5 percentage point rise in the national poverty headcount.

1. INTRODUCTION

The COVID-19 pandemic is creating considerable social and economic havoc globally. Between the first known case in December 2019 and 10 August 2020, the virus infected more than 20 million people and killed more than 730,000 worldwide (WHO 2020). To reduce further spread of the virus and to limit the possible long-term impact of the pandemic on the economy, countries have introduced various degrees of response measures, including restrictions on movement of people and on activities. While these restrictions are expected to reduce the spread of the virus, they are also anticipated to have significant direct or indirect impacts on the economy. As a result, the world economy is experiencing an unprecedented downturn as the response measures, including partial or full shutdowns of economic activities, simultaneously affect both domestic and global value chains. Ethiopia is not an exception and is suffering from the humanitarian and economic impacts of COVID-19. Quantifying and understanding the economic impacts of the pandemic is a topical issue for Ethiopia.

Using a SAM-based multiplier model analysis method, this study estimates the economic and welfare effects of COVID-19 on the Ethiopian economy through carefully identified channels. Early estimates indicate that the pandemic affects sectors and segments of the society differently (Goshu et al. 2020; Zhang et al. 2020). The effects of the pandemic and the associated response measures on the economy depend on the nature of the most vulnerable sectors that receive the first direct impact of the changes. The early sign of the global impact of the COVID-19 shock on national economies was a decline in essential imports and exports as a result of border closures by trading partners and declines in global demand due to economic restrictions. Remittance flows also can be hampered by job losses and the risks to employment faced by the remitting diaspora community due to layoffs and stay-at-home measures in their host countries.

By making informed assumptions regarding such shocks, we analyze the possible effect of COVID-19 on the Ethiopian economy by focusing on three external channels: exports, strategic imports, and remittances. It is through these channels that the pandemic may have had its earliest and possibly the largest impacts on the economy. However, the estimates of the economic impact of COVID-19 from our analysis pertain only to the channels identified and do not reflect the full impact of the pandemic on the Ethiopian economy. We do not examine a number of other potentially important channels through which COVID-19 might affect the economy, including a sharp drop in imports of consumption items, a decline in foreign direct investment, sharp falloffs in government grants and loans from abroad, and restrictions on a number of domestic activities, including for restaurants and bars, transportation services, sporting events, and markets. Hence, in light of these limitations on the scope of our analysis, we suggest that our results be interpreted with caution.

Despite this limitation and the usual caveats recognized in using multiplier models to estimate the impact of economic shocks, this study has important implications for guiding the design and implementation of response measures in Ethiopia by providing an informed assessment of the impact of the pandemic. The results of the various scenarios run with two models of the Ethiopian economy suggest ways to stimulate economic growth, support household welfare, and ensure robust agri-food system during and after the pandemic. Growth in the Ethiopian economy in recent years has been significantly dependent on the performance of the external sector. Consequently, efforts to link exporters to markets both internationally and locally must be boosted. The other main channel of the impact of the pandemic on Ethiopia's agri-food system is through a decline in the importation of strategic capital goods, such as fertilizer, fuel, machinery, and other production inputs. To support local production, selective mechanisms to support imports of strategic

intermediate inputs should be put in place by government. Stimulus packages targeted at the manufacturing sector at all scales of production are needed as a part of efforts to recover the many jobs lost early in the COVID-19 crisis and to expand employment opportunities across the economy.

2.   COVID-19 CASES IN ETHIOPIA AND POLICY RESPONSES

As of 10 August 2020, Ethiopia had reported over 23,500 COVID-19 cases and 423 deaths. To limit the spread of the virus after the first case in the country was recorded on 13 March, Ethiopian authorities took several precautionary restrictive measures (Figure 2.1). On 14 March, the government mandated the closure of schools and banned public gatherings of more than four people. This include banning all sporting activities, closing all bars and entertainment outlets, and restricting the number of customers hotels and restaurants could serve at a time. Public transport providers were expected to operate at half-capacity.

Figure 2.1: COVID-19 related cases and policy timeline in Ethiopia, March and April 2020
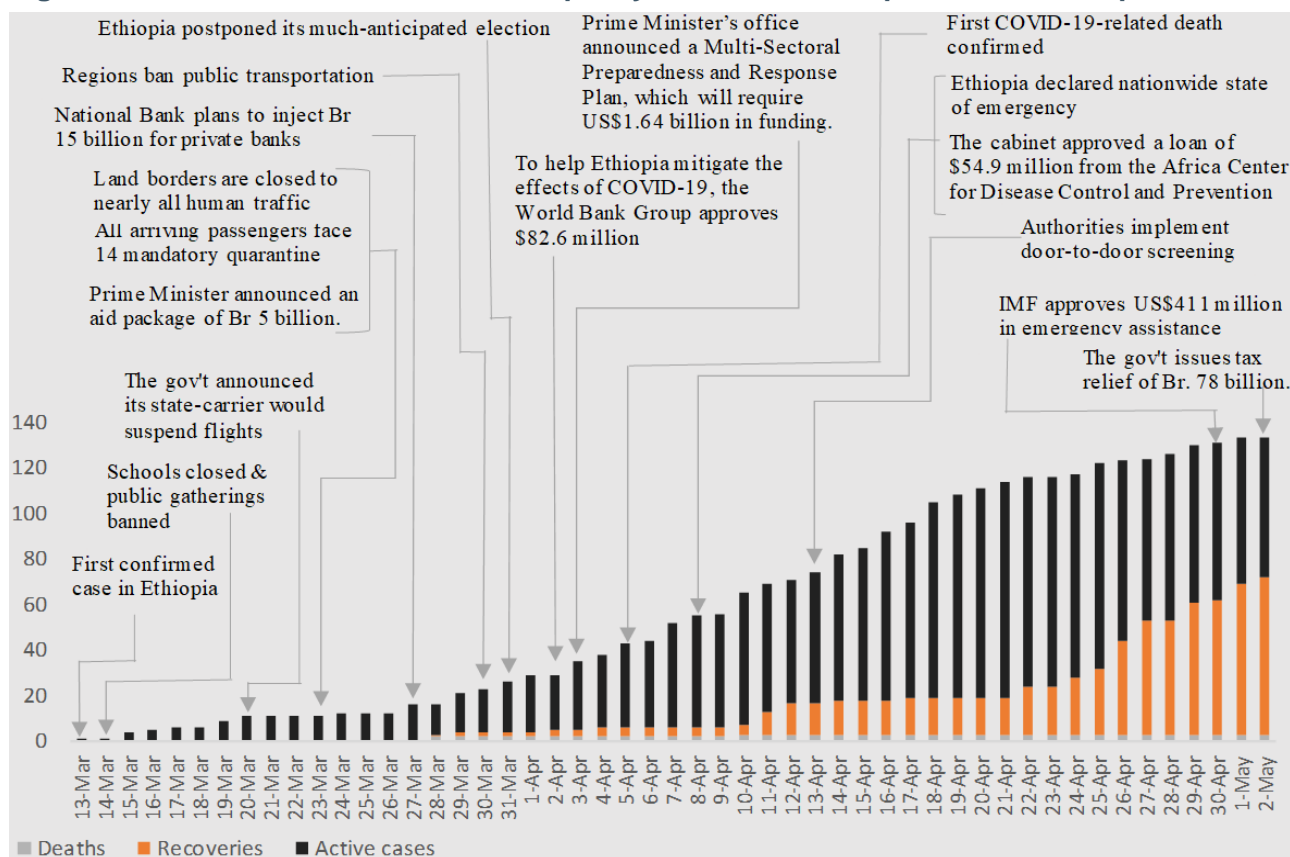
Source: Data from worldometers.info (2020); framework adapted from Andam et al. (2020)

On 20 March, the suspension of Ethiopian Airlines flights on about 80 routes was announced. On 23 March, the government mandated all passengers entering the country to undergo a mandatory 14-day quarantine at the cost of the traveler. Also, the authorities closed Ethiopia's land borders. On the same day, government announced that it had established a stimulus package of Birr 5 billion (USD 154 million) to be used to build resilience against the virus and to mitigate its potential economic impact (IMF 2020). On 27 March, the National Bank of Ethiopia stated that it plans to inject Birr 15 billion (USD 456 million) as liquidity for private banks. On 30 March, the federal and regional authorities imposed a ban on inter-regional public transport, although this was

later relaxed. Government announced on 31 March the postponement of national elections that were to be held on 29 August.

On 3 April, the government announced a finance agreement with the World Bank for Birr 2.64 billion (USD 82.6 million). This fund, of which half was on grant terms and half as a loan, was provided in support of government's efforts to contain COVID-19 (Ministry of Finance 2020). The Prime Minister's Office announced the same day a COVID-19 Multi-Sectoral Preparedness and Response Plan, the full implementation of which will require USD 1.64 billion in funding.

The first COVID-19 related death in Ethiopia was registered on 5 April. Three days later, government declared a state of emergency that gives it the mandate to take measures to further curb the transmission of the virus (IMF 2020). On 13 April, government begun door-to-door screening in Addis Ababa and surrounding areas, followed by cities in other regional states. In late April, the executive board of the International Monetary Fund approved USD 411 million in emergency assistance to Ethiopia to address COVID-19. Government also announced at the same time a package of tax relief amounting to Birr 78 billion (USD 2.44 billion).

All of these COVID-19 related restrictions are expected to cause massive disruptions in various economic sectors and for the economy as a whole. The external sector is expected to be particularly affected due to lower demand in importing countries, Ethiopia's main exports significantly dropped in March and April. Exports of cut flowers, in particular, massively collapsed.

3. DATA AND METHOD OF ANALYSIS OF THE SHORT-TERM IMPACT OF COVID-19

3.1. Data: Social Accounting Matrix (SAM)

A Social Accounting Matrix (SAM) provides a good representation of a given economy. It depicts detailed resource flows (all transfers and real transactions) between activities (such as agricultural, industrial, and service), factors of production (e.g., labor, capital, and land), and institutions (households, government, and the rest of the world), often over a financial year (Breisinger et a. 2009). It offers a powerful tool to study the structure of an economy and the interdependence between different sectors.

For this analysis, we utilize two recent SAMs developed for Ethiopia. The first is a 2017 SAM that was developed by the International Food Policy Research Institute (IFPRI) as part of the Nexus SAM project. The second is a 2015/16 SAM constructed by the European Union in collaboration with experts from the Policy Studies Institute (PSI).

▪ The 2017 SAM (henceforth IFPRI-SAM) has 79 production sectors (industries) and 80 commodity types. The production sectors employ eight types of labor classified by residence (rural or urban) and skill jointly with a single land and three types of capital factors. Factor incomes are distributed to 15 representative household types classified by residence (rural farm, rural non-farm, or urban) and income quintiles. Households spend their incomes on consumption, transfers, and taxes putting the balance into savings. Government receives taxes and makes expenditures, including transfers to households. In the 2017 Ethiopian SAM, there are also several tax accounts and an account for the rest of the world.

▪ The 2015/16 SAM (henceforth EU-SAM) is disaggregated by agro-ecology level and consists of 227 accounts, including 61 activities, 71 commodities, six factors of production (with labor and capital also further disaggregated by region), three types of taxes (direct, indirect and

import), 28 regionalized households, and one account each for margins, saving-investment, enterprises, government, and rest of the world.

We employ both of these SAMs for Ethiopia to provide a range of estimates of the economic effects of COVID-19 stemming from external mechanisms.

3.2. Methodology: SAM multiplier analysis

Given COVID-19 induced global restrictions on movement of people and on activities and the resultant slowdown in demand for goods and services, the Ethiopian economy changed significantly in 2020. Most affected were its export and import levels, remittance flows, and tourism sector. While the country introduced domestic control measures to limit transmission of the virus, these were not as stringent as measures adopted by most other countries in Africa. Consequently, we expect that the external channels through which COVID-19 has affected national economies globally had more significant impacts on the Ethiopian economy than did domestic control measures. Analysis of the overall economic impact of such shocks at a national level requires a custom designed economywide approach.

Modelers have alternative methods at their disposal for studying the impacts of economywide shocks. At the forefront are general equilibrium models that embody in them endogenous price changes and standard producer and consumer optimization behaviors in response to changes in relative prices. However, with COVID shocks being unexpected and at a relatively high level of severity in such short period, it is unlikely that the economy can fully adjust to such a shock in the short to medium-term through smooth changes in relative commodity and factor prices. With such shocks, fixed price multiplier models prove more appropriate for examining their economic impact. Accordingly, this study applies a multisector income multiplier model (henceforth SAM multiplier) built on the two SAMs for Ethiopia introduced earlier.

SAM multiplier models are ideally suited to measuring the short-term direct and indirect impacts of unanticipated, rapid-onset demand- or supply-side economic shocks, such as those caused by the COVID-19 pandemic (Breisinger, Thomas, and Thurlow 2009; Round 2003). By tracing the backward and forward linkages between different accounts, these models capture the direct and indirect effects of a shock. For example, a decline in remittances will reduce the purchasing power of receiving households. This, in turn, will further lower domestic demand for commodities, say agricultural. Lower demand will affect different actors across agricultural value chains, including farmers producing those commodities.[1]

Following Arndt et. al (2013), let X be an nX1 vector of sectoral gross outputs. Let there be n sectors (firms) in the economy producing n homogenous items. Let F be an nX1 vector of sectoral final demands and B be an nXn matrix of coefficients representing intermediate inputs per unit of gross output. Given the I-O (or B) coefficients and structure of a given SAM, we can represent gross output as:

$$B * X + F = X \tag{1}$$

Rearranging Equation (1) through mathematical operations, we arrive at the Leontief matrix:

$$(I - B)^{-1} * F = X \tag{2}$$

where $(I - B)^{-1}$ is the Leontief inverse matrix and I is identity matrix. The above equation can be used to calculate the change in endogenous accounts associated with any change in the

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[1] For more on SAM multiplier models, see Breisinger et al. (2009) and Adelman and Robinson (1986).

exogenous accounts, such as decline in export demand, given the Leontief inverse matrix. Given an assumption of linearity, we derive the SAM multiplier model as:

$$(I - B)^{-1} * \Delta F = \Delta X \tag{3}$$

We use the SAM multiplier model to analyze the short-run impact of COVID-19 on the Ethiopian economy. As briefly stated, while the pandemic can affect the economy through a number of channels, some sectors are expected to be directly and strongly affected by the pandemic. These include, for example, lower export or import volumes due to international travel restrictions, low remittances as firms in host economies lay off workers in the Ethiopian diaspora, reduced foreign direct investment, or reduced food aid or other development assistance. Hence, we were selective of the impact channels examined, focusing on the most proximate external routes through which the pandemic could have a direct impact on the Ethiopian economy. (See Annex 1.)

As powerful as they are, SAM multiplier models have several limitations. First, the model assumes that technical input-output relationships, output choices of producers, and consumption patterns of households do not change in response to the simulated shock. It is thus unable to capture the basic behavioral responses of economic agents, such as substitution in consumption and production, in response to changes. Second, these models assume prices remain unchanged in response to changes in exogenous demand. Since flexible prices and behavioral responses are incorporated into general equilibrium models, such alternative economywide models are often considered superior to fixed-price models. However, considering that the COVID-19 shocks constitute an almost catastrophic lockdown of demand and economic activities, rather than a shock to equilibrium where adjustments work through price-endogenous market mechanisms, the SAM multiplier framework is appropriate in this context, at least in the short run (Amewu et al. 2020).

3.3. Designing the simulations

Before considering their design, it is important to highlight how the results of the modeled scenarios should be viewed and interpreted. Because of the nature of both the shock and the SAM multiplier model, as described above, our analysis provides a scenario estimate of selected economic indicators given our assumptions on the duration of the pandemic and the magnitude of its economic effects. The results of scenario analyses are not forecasts of the future. Rather, they should be viewed as counter-factual comparative static exercises against a normal situation without COVID over the pandemic period simulated. Using a consistent empirical model for conducting such a counter-factual assessment provides a disciplined framework for analysts, which can support coherence in policy debates (Zhang et al. 2020). Note also that we are not modelling either a slow or rapid recovery of the economy after the pandemic or any stimulatory interventions the government might have planned to bring the economy back to its previous growth trajectory. We assume that the economy recovers back to the normal trend after the pandemic dissipates, although it will be starting from a low base in the immediate aftermath of the shock.

As discussed earlier, the COVID-19 pandemic is anticipated to have a relatively more direct effect on the economy through external channels: strategic imports, remittances, and exports. In fact, the government of Ethiopia so far has not enforced any fundamental domestic closure of the economy. As explained, the simulations are introduced as demand-based shocks. Under each simulation (external channel), we further experiment with four different timespan scenarios for which the pandemic is assumed to last: 2-month, 3-month, 6-month, and 9-month. However, in our discussion of results, we consider only the 3-month and 6-month scenarios.

Since our SAM contains annual values of the component accounts, we assumed proportional shock levels for each of the timespans we consider. For example, for the 2-month duration

scenario, we assume the pandemic affects 16.7 percent of the annual final demand, i.e., 2/12 of the annual value; for the 3-month duration, 25 percent; etc.

Within each of these timeframes, we simulate the multiplier effects of the pandemic through the following channels:

1. **Remittances only**: Here, we show the possible impact of substantially lower remittances to Ethiopia due to COVID during the pandemic duration.

2. **All commodity exports**: This simulation looks at the impact of COVID-induced reductions in commodity exports on the Ethiopian economy during the designated periods.

3. **Strategic imports**: Here we examine the negative shocks to strategic or otherwise essential imports, such as fertilizer, fuel, chemicals, mineral products, metal, vehicles, electrical equipment, machinery, and manufacturing materials.

4. **Strategic imports + Exports + Remittances**: This simulation presents the possible combined impacts of COVID driven changes throughout all three channels: strategic imports, exports, and remittances.

For each of these simulations, we assume linearity in the shocks and effects across the timespans considered. For example, for the export reduction simulation, we reduce the value of exports by the respective shares of each time period. In addition, within each timespan scenario, we assume three levels of disruption to the channels: 25, 33, and 50 percent.[2] However, we only report results under the 33 percent disruption scenario.

In addition, our reported scenarios on exports refer to decline in export performance of most commodities by 33 percent over 3-months and 6-month durations. Exceptions are for the flower, coffee, cloth, leather, and textile export sectors, which are anticipated to decline more strongly. Flower is assumed to decline by 100 percent during the pandemic, while coffee, cloth, leather, and textile exports are anticipated to decline by 50 percent.

4. MODEL RESULTS

In the discussion of results, we reiterate that our estimates do not reflect an assessment of the full impact of COVID pandemic on the Ethiopian economy, but only related to the potential effects through COVID-19 related shocks to remittances, export demand, and strategic imports. It is understood that the pandemic has directly affected private – such as bars and restaurants – and public – such as education and public administration – sector operations. Further, the model estimates of the economic costs are the effects in the absence of any policy responses that the government, in collaboration with other development agents, is taking.

As noted, the simulation results from the two SAM multiplier models used (IFPRI-SAM and EU-SAM) are presented for scenarios representing 3-month and 6-month durations of the shock-induced slowdown in economic performance in Ethiopia through declines in remittances, exports, and imports. The simulation results are annualized such that the effects can be interpreted against economic outcomes under normal annual performance. We first report the combined effects of the three external impact channels before providing the decomposition of the impact channels at the end of this section.

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[2] These are based on careful empirical analysis of each sector and findings of key informant interviews. In addition, the authors have experimented with other shares (lower/higher) that the authors can share upon request.

4.1. The GDP effect of COVID-19

Figure 4.1 (left) highlights the macroeconomic costs of the COVID-19 pandemic summarized by its effects on total GDP for 3-month and 6-month COVID-19 duration. In the absence of any policy responses, the Ethiopian economy is expected to experience a loss of between 2.2 and 2.7 percent of its annual GDP during the 3-month slowdown through the three external impact channels compared to a no-COVID situation. These effects are assumed to increase linearly as the duration of the shock increases with the same level of direct impact on the channels considered. Thus, the GDP cost of the pandemic could rise to between 4.3 and 5.5 percent if the pandemic-related disruptions continue for 6 months. Given the original GDP growth projection for the Ethiopian economy for 2020 of 6.3 percent, this suggests that annual growth for the Ethiopian economy for 2020 will remain positive even under a shock of six-month duration.

Figure 4.1: Estimates of percentage reduction in Ethiopia's GDP due to COVID 19 pandemic, by pandemic duration, IFPRI and EU SAM multiplier models
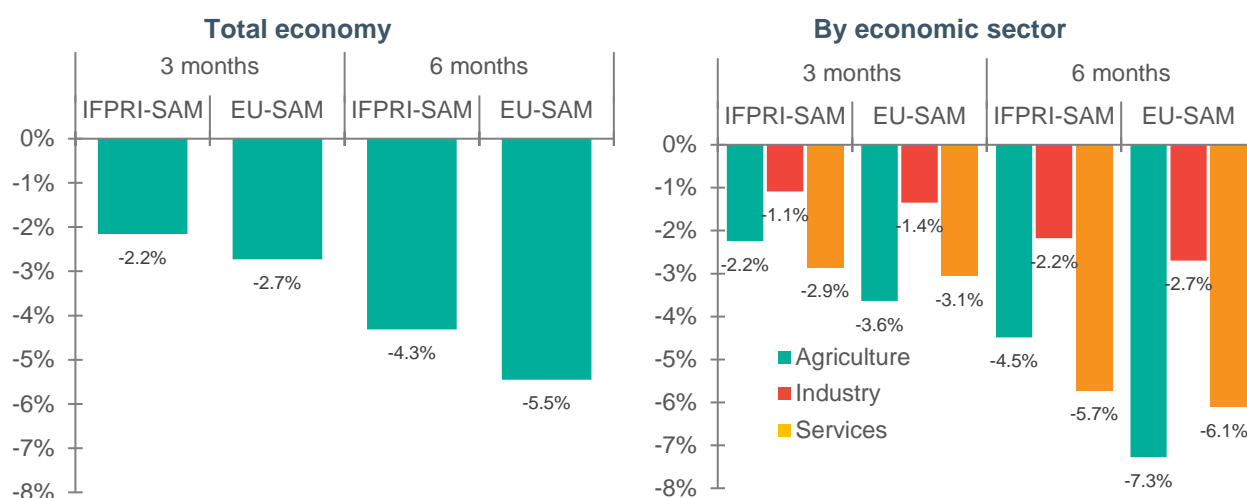
Source: Multiplier model results for Ethiopia

Figure 4.1 (right) displays the declines in gross output for the three aggregate economic sectors – agriculture, industry and services – scaled to the annual output levels for each. The two SAM multiplier models provide dissimilar estimates on the rank of sectors as affected by the pandemic at the gross output level. While the IFPRI-SAM model suggests the services sector faces the greatest burden of output loss, the EU-SAM identifies the agricultural sector the most at risk. While the decline in the service sector output could be related mainly to poor performance in hotels and restaurant and in transportation, the loss in output in the agricultural sector pronounced by the EU-SAM model is related to both the direct and the indirect effects of the pandemic that passes through the export channel.

Both models predict consistently lower effects on the industrial sector. This is for several reasons. First, no direct industrial sector restriction was imposed by government as part of its efforts to control the spread of the virus. Rather, producers have been encouraged to scale up their production activities as much as possible. Second, compared to the other two major economic sectors, the industrial sector has limited production and demand linkages within the domestic economy resulting in small economywide effect on the sector overall.

4.2. The impact of COVID-19 on factor income

The decline in economic activity due to the COVID-19 pandemic ultimately causes declines is factor returns. The role of the export channel on changes in factor income is reflected in a possible

strong decline in returns to land (Table 4.1). Labor income is estimated to decline by between 2.1 and 2.6 percent due to the economywide effect of the change in exports, imports (of strategic goods), and remittance flows by the simulated levels over a 3-month period. Our estimates show that the pandemic mainly affects households in the less educated group (-2.2 to -2.9 percent under the 3-month duration scenario) compared to the more educated group (-1.4 to -1.6 percent).

Table 4.1: Factor income effect of COVID-19, by pandemic duration, IFPRI and EU SAM multiplier models, percent change

	Duration of lockdown			
	3 months		6 months	
	IFPRI-SAM	EU-SAM	IFPRI-SAM	EU-SAM
Labor	-2.1	-2.6	-4.2	-5.2
Less educated	-2.2	-2.9	-4.4	-5.7
More educated	-1.6	-1.4	-3.2	-2.9
Land	-2.6	-3.7	-5.3	-7.3
Capital	-2.1	-2.6	-4.3	-5.3

Source: Multiplier model results for Ethiopia

4.3. The impact of COVID-19 on household welfare

The slowdown in economic activity due to the COVID-19 pandemic can affect the population through its effects on the availability of commodities and purchasing capacity. The real incomes of households reflects purchasing capacity. Figure 4.2 reports changes in real incomes among rural and urban households and for the poor and non-poor. Poor households are those in the lowest two income quintiles.

Figure 4.2: Estimates of percentage reduction in household income in Ethiopia due to COVID-19, by pandemic duration, IFPRI and EU SAM multiplier models
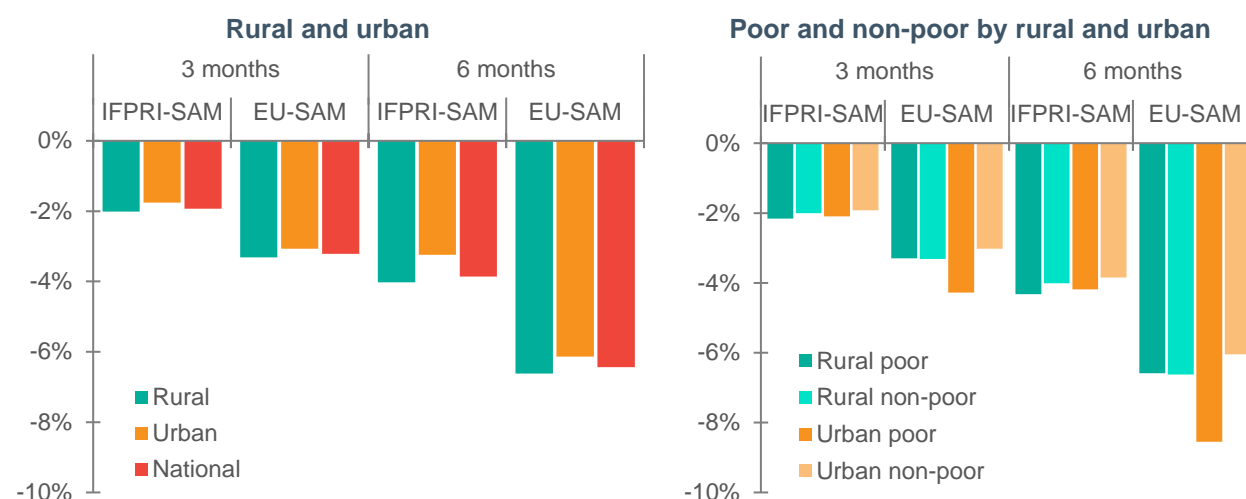
Source: Multiplier model results for Ethiopia

The two SAM multiplier models suggest the costs of the external channel related impacts of the COVID-19 pandemic on the welfare of households can range between 1.9 and 3.2 percent of what otherwise would have been the case without COVID-19 at the national level for a 3-month lockdown. The welfare loss linearly increases with the duration of the pandemic. Our estimates are of a 3.9 to 6.4 percent decline in income if the slowdown continues for six months. Due to Ethiopia's exports being dominated primarily by agricultural products, the adverse effects on income are stronger for rural households, which are more dependent upon agricultural livelihoods.

The estimate on the relative impact of the pandemic on the welfare of rural and urban households could change if domestic channels also are accounted for.

The right block of Figure 4.2 also reports the real income effect of the pandemic on households by their poverty status. Whereas the two models indicate comparable welfare effects between poor and non-poor rural households, the results suggest that the economic slowdown that is linked with the three external channels considered could be more costly for the urban poor. In particular, the urban poor could see a loss in real incomes in the range of 2.1 to 4.3 percent for a 3-month slowdown. These losses would double if a weak eternal sector performance over six months is considered.

4.4. The impact of COVID-19 on household poverty

Figure 4.3 presents the estimated effects of COVID-19 on poverty. The poverty effects are estimated using a poverty module that is linked top-down to the IFPRI-SAM multiplier model. In generating the poverty estimates, we assume that economic restrictions during the pandemic period translate into declines in household income that are reflected in declines in household consumption expenditure. In reality, some employers would have continued to pay workers during the economic slowdown or households would have been able to draw on savings or sale assets to sustain consumption. Consequently, our result may overstate the actual state of poverty at the household level measured as the ability of people to access food.

Figure 4.3: Change in prevalence of poverty in Ethiopia due to COVID-19, by duration of pandemic
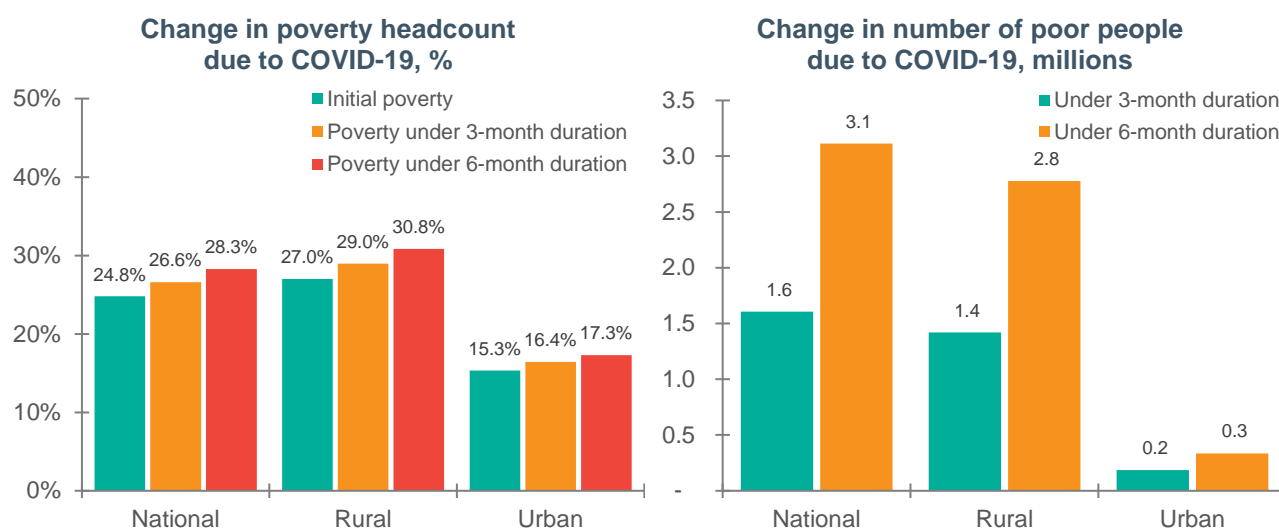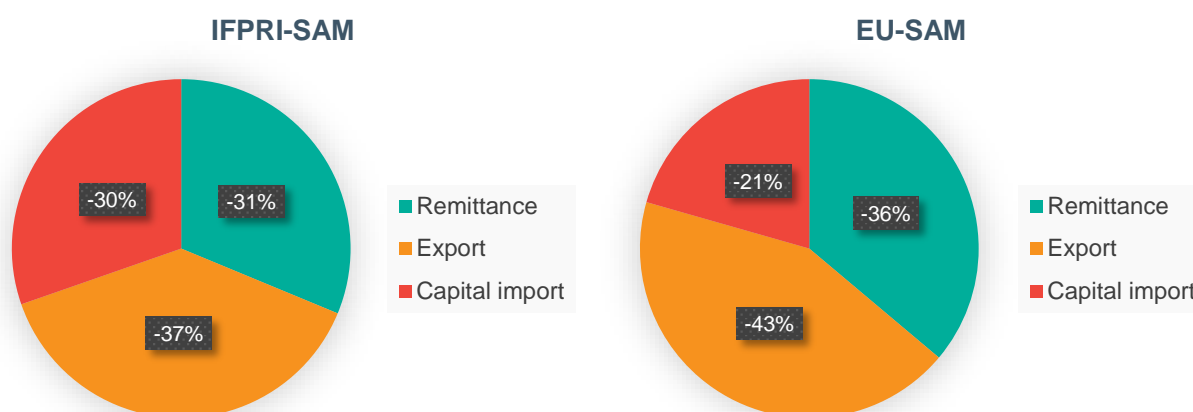

Source: IFPRI-SAM multiplier model results for Ethiopia

Under such a background, we find that, during a three-month shock duration, the national rate of poverty increases by 1.8 percentage points from a base of 24.8 percent to 26.6 percent. This equates to 1.6 million additional people falling below the national poverty line. This estimate can increase proportionately to 3.1 million people (or by 3.5 percentage points from the base rate) with a COVID-19 shock duration of six months. Rural households account for close to 90 percent of those that fall into poverty. In addition to the overall size of the rural population, this is because many rural households have levels of consumption just above the national poverty line, so that adverse income shocks easily drive them into poverty.

4.5. Decomposing the impact of external channels

Figure 4.4 illustrates the contribution of each external channel to the total COVID-19 induced economic shocks of external origin. Whereas there is a marked difference in the share of each of the channels, the two SAM multiplier models rank the channels in a similar way. Export is the dominant channel explaining the estimated cost of COVID-19 through external channels on the Ethiopian economy. The predicted slump in export performance explains more than 37 percent of the economic decline, leading to a 0.8 to 1.2 percent decline in annual GDP. In fact, economists at the World Trade Organization (WTO) expect world trade fall by between 13 and 32 percent in 2020 as the COVID-19 pandemic disrupts normal economic activity (WTO 2020). The local economic growth implications of this poor global trade performance are unprecedented.

Figure 4.4: Contribution of each channel to total economic effects of COVID-19 of external origin in Ethiopia, IFPRI and EU SAM multiplier models

Source: Multiplier model results for Ethiopia

Remittances are ranked second in significance by both SAM multiplier models as an external channel for how COVID-19 adversely affects the economy of Ethiopia. Remittances are an extremely important source of foreign exchange for Ethiopia, perhaps larger than the export earnings of the country. Hence, not surprisingly, our estimates show a drop of between 0.7 and 1.0 percent in GDP due to a 33 percent decline in remittance flows over a 3-month period. This effect would double to between 1.4 and 2.0 percent if the effect of the pandemic on the global economy persists over 6 months.[3] Studies have long shown that remittances are strategic in the effort to reduce poverty and improve nutritional outcomes in poorer communities.

5. CONCLUSION AND IMPLICATIONS

The COVID-19 pandemic has been both a global health and a global economic challenge since its outbreak in December 2019. Due to limited direct restrictions on local business by the government of Ethiopia, trade (export and import) and remittances are so far the main channels of the effects of the pandemic on Ethiopia's economy. In this study, we estimated the GDP, factor income, and welfare effects of COVID-19 that emerge through these three channels using SAM multiplier models built on two recent SAMs for Ethiopia estimated under separate initiates. Estimates from the two economywide SAM multiplier models show that GDP may decline by between 2.2 and 2.7 percent if the pandemic affects economic activity for three months. The effects on factor returns

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[3] Our assumption of a 25 percent decline in remittance flows is consistent with a recent assessment by the World Bank of a 23 percent decline in remittance flows globally in 2020 due to the economic crisis induced by the COVID-19 pandemic and shutdown (World Bank 2020).

and household welfare are also significant. Poor urban households are of a particular concern as their livelihoods are badly hit by COVID-19, and because they spend a disproportionally large share of their income on food, housing, and other basic needs.

These assessed economic costs to Ethiopia of the COVID-19 pandemic should be interpreted carefully for several reasons. First, this is only a partial analysis of the full effects of the pandemic and is likely to underestimate its impact on the economy. Second, these estimates are from a modelling analysis and are based on assumed changes in key channels of COVID-19 impact for which there has only been limited early assessments about the effects. Third, these assessed costs do not reflect the policy and precautionary responses that the government of Ethiopia, in collaboration with its development partners, and the individual households may have pursued to lessen the effects of the pandemic. For these and other reasons, the estimated effects reported in this study should be considered a first-round assessment of the effects of the pandemic on the Ethiopian economy.

Nonetheless, this rapid assessment has important implications for policy in Ethiopia on how to stimulate economic growth and support household welfare during and after the end of the pandemic. Growth in the Ethiopian economy has become significantly dependent on the performance of the external sector. Consequently, efforts to link exporters to markets, both internationally and locally, must be boosted. The other main channel of impact of the pandemic on Ethiopia's agri-food system is through reductions in strategic imports, such as fertilizer, fuel, machinery, and other production inputs. A mechanism to selectively support imports of strategic intermediate inputs, such as tax holidays, should be a priority for the government in its efforts to support local production. A drive to rebuild and expand the number of jobs available in the Ethiopian economy could remain at risk during the pandemic, suggesting that the government should introduce alternative stimulus packages – in collaboration with the donor community – to the manufacturing sector at all scales.

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ANNEX: ETHIOPIA – EXTERNAL SECTOR PERFORMANCE, 2014/15 TO 2018/19

	2014/15	2015/16	2016/17	2017/18	2018/19
Total Imports, million USD	16,458.6	16,725.2	15,802.6	15,253.4	15,112.0
Private transfers, million USD	4,881.6	6,428.6	5,485.3	6,074.8	6,375.4
Foreign direct investment, million USD	2,202.2	3,268.7	4,170.8	3,723.4	3,015.4
Official transfers, million USD	1,507.9	1,391.1	1,428.3	1,251.7	2,086.7
Export (merchandise) , million USD	3,019.3	2,867.7	2,907.5	2,839.8	2,666.5
Exports as a percentage share of imports, by value	18.3	17.1	18.4	18.6	17.6
Total exports, %	100.0	100.0	100.0	100.0	100.0
Coffee	25.8	25.2	30.4	29.6	28.7
Oil seeds	16.9	16.6	12.1	14.9	14.5
Chat	9.0	9.2	9.4	9.3	11.4
Pulses	7.3	8.1	9.6	9.5	10.2
Gold	10.6	10.1	7.2	3.5	1.0
Flower	6.7	7.9	7.5	8.1	9.6
Live animals	4.9	5.2	2.3	2.2	1.7
Meat & meat products	3.1	3.4	3.4	3.6	3.3
Leather & leather products	4.4	4.0	3.9	4.7	4.4

Source: Based on NBE (2014-2019)

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