COVID-19 and perceived effects on agricultural financing in Africa: Evidence and policy implications

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Abstract
This study examines the potential effect of COVID-19 on agricultural financing by drawing lessons from past global crises and their link to agricultural financing. With significant impact in multiple sectors, COVID-19 has caused significant liquidity shortage in the banking and financial institutions sectors that led to widespread business failure. Analysis at the macro, sectoral, and farmer levels confirms the decline in the financing allotted to the agricultural sector in Africa, which could exacerbate the existing structural gap in agricultural financing. Many policy responses and stimulus packages designed to address the negative effects of the crisis are found not to be enough. At the farmer level, findings indicate that many farmers are finding it more difficult to access credit than before the COVID-19 crisis. For individual governments, a better understanding of the magnitude of the agricultural sector financing and investment needs to propose appropriate complementary responses is lacking. We suggest that, in the face of such a crisis, while in the short term the agricultural sector needs emergency funding, in the medium and long term, greater financial support is required, including long-term resources at concessional rates, guarantee funds, and more suitable insurance products combined with social safety nets.

KEYWORDS
Africa, agricultural finance, agriculture, COVID-19, public policy

1 | INTRODUCTION

Access to finance is an important factor for economic and agricultural sector development and improvement of livelihoods in most African countries. Historically, financing for agriculture has been very low, just about 4.3% of total credit to the African economy in 2019 (Food and Agriculture Organization, 2021) and the annual financing gap to the agricultural sector in sub-Saharan Africa was estimated at US$180 billion as of 2017 (Dalberg, 2018).

The COVID-19 outbreak hit African economies hard, with significant damage in multiple sectors, including agriculture (Anyawu & Salami, 2021). Although the continent has started to recover slowly, like other countries in the world (African Development Bank 2021), the unprecedented crisis has caused significant disruption in the agricultural value chain, preventing access to fertilizers, improved seeds, irrigation tools, and markets (Dokle, 2020; Initiative for Smallholder Finance [ISF] Advisors & Rural and Agricultural Finance Learning Lab., 2021; Nchanji & Lutomia, 2021), which may have a negative impact on agricultural production and productivity growth. Prior to the COVID-19 pandemic, Africa had made significant progress in a broad range of social and economic indicators, including in
infrastructure, education, agriculture, and so on. For example, in the agriculture sector, labor productivity increased by 73.3%, from US$858.8 to US$1488.1 per worker and agricultural yield by 28.6% over the period 2000–2019 (Food and Agriculture Organization, 2021; Zeufack et al., 2021), even though Africa still lags behind other major regions. The impacts of COVID-19 were also felt in the financial market, with liquidity shortage in the banking and financial institutions (FIs) that led to widespread business failure and permanent economic slowdown (Kuckertz et al. 2020; Organization for Economic Co-operation and Development, 2021; Tetlow & Dalton, 2020; World Bank, 2020).

Government responses combined with the regional or national central bank responses in Africa were diverse and vital to address the negative effects of the pandemic. Though differences exist across countries, resources have been redirected primarily toward the health sector, then to the whole business sector. But in general, the riposte plans have paid less attention to other sectors, including agriculture. Very few countries designed a strategy for the agricultural sector, and among them, very few have addressed the issue of agricultural financing. In this context, lending to the agriculture sector declined at macro as well as micro scales, given the crisis resulted in liquidity shortage and hardened FIs’ willingness to lend to agriculture. At the micro level, according to some recent studies, many farmers claimed that they are experiencing or have experienced more difficulties in accessing credit than in the past, that is, before the COVID-19 crisis (Dokle, 2020; Nchanji & Lutomia, 2021; Siddiqui et al., 2020; World Bank, 2020).

By focusing our analysis on former global crises and their potential impact on the agricultural financing trend in the world in general and in Africa in particular, we investigate the impact of the current COVID-19 pandemic on agriculture financing in Africa. Particularly, the study addresses the following questions:

- What can we learn from previous international crises and their potential impact on agricultural finance?
- How is the agricultural financing (macro and micro levels) impacted by COVID-19 in Africa?
- Are government responses to the negative effects of COVID-19 on agricultural financing effective?
- How could the government responses be reinforced to maximize their benefits in agricultural financing?

Existing literature does not pay sufficient attention to these specific questions. To address them, the study makes use of a combined approach of literature review and analysis of publicly available macro and micro data. We rely on the literature review to examine how COVID-19 and the measures to limit its spread have affected financing to the agriculture sector in Africa. In the absence of 2020 macro (or aggregate) data on the evolution of private financial credit to agriculture in the world and in Africa, the study uses sectoral data provided at country level and makes use of survey results from various farmer-level studies to assess the effects of the COVID-19 pandemic based on farmers’ perceptions. So, data from various sources (FAOSTAT, World Bank, national statistics and results of studies based on survey data collected at the farmer level) will be mobilized to discuss the potential impact of the COVID-19 pandemic on agricultural finance. We also provide policy implications based on the recent trend and strategies to be implemented to leverage agricultural financing and its potential.

2 AFRICA’S AGRICULTURAL PERFORMANCE AND FINANCING PRIOR TO COVID-19

2.1 Agriculture sector importance for African countries

The role of agriculture remains fundamental in most African countries, particularly for the livelihood of more than half of Africa’s population (Organization for Economic Co-operation and Development and Food and Agriculture Organization, 2016). Although the share of agricultural employment rate in total employment has declined over the period 2004–2019, it remains high at 52% in sub-Saharan Africa and 43.8% in Africa (International Labour Organization, 2021). African countries with the higher contribution of agricultural employment in total employment are in Eastern Africa and Southern Africa (Table 1). The average agricultural growth rate over the period 2004–2019 is 4.2%, with a difference between African regions (Regional Strategic Analysis and Knowledge Support System, 2022). The Western Africa region performed well compared to other regions, particularly the Southern region where GDP grew very slowly. Though agriculture’s share of GDP decreased, this share is among the highest, averaging about 25% compared to 10% worldwide (Koloma, 2021). If in some countries the share of GDP tends to decrease, in others, particularly in the Eastern region countries, there is a vigorous increasing trend in the share of GDP and the annual growth of agricultural value added between 2004 and 2019.
Yet, the trend in agricultural value-added growth is erratic and doesn’t show a sustainable pathway. A selected list of countries, such as Burkina Faso, Nigeria and Morocco, tended to perform poorly in 2019 against the 6% average annual agricultural growth rate target set by the African Union Commission, known as the Maputo Declaration. As a result, this situation makes the primary agriculture sector very vulnerable, constrained by climate hazards, insufficient and fluctuating rainfall, weak water control and terms-of-trade degradation and driven by the low use of agricultural fertilizers and the extremely low level of mechanization in African countries (Koloma, 2021; McArthur & McCord, 2017).

### 2.2 Financing of the agricultural sector and agricultural productivity

#### 2.2.1 Agricultural financing performance before COVID-19

Financing in favor of the agricultural sector has increased globally over the period 2000–2019. More generally, as of 2018, 11.4% of formal financing for the agricultural sector was provided by donor resources, 49.6% by public financing and 38.9% by domestic FIs (Figure 1). Whereas public funding increased between 2017 and 2018, financing from donors and domestic FIs decreased by about 3.0%.

African governments’ financial efforts to the agricultural sector increased over the last two decades. Globally, the government agriculture expenditure has doubled from US$10.1 billion in 1980 to US$21 billion in 2019, based on constant 2010 US dollars (Regional Strategic Analysis and Knowledge Support System, 2022). Although this funding is increasing, Figure 2 shows that the share of government spending dedicated to the agricultural sector has rather decreased. It stood at 3.6% in 2019, down from 5.7% in 1990, which is much lower than the 10% commitment of the

| Country     | Rural population (% of total population) | Agricultural employment rate/total employment | Annual GDP growth % | Gross agricultural value added (% GDP) | Annual growth of agricultural value added (%) |
|-------------|-----------------------------------------|---------------------------------------------|---------------------|---------------------------------------|---------------------------------------------|
|             | 2004 | 2019 | 2004 | 2019 | 2004 | 2019 | 2004 | 2019 | 2004 | 2019 | 2004 | 2019 |
| **Western Africa** |       |       |       |       |       |       |       |       |       |       |       |       |
| Burkina Faso | 79.0  | 70.0  | 71.0  | 26.0  | 4.5  | 5.7  | 23.4  | 20.2  | −5.2  | 1.7  |
| Côte d’Ivoire | 55.0  | 49.0  | 50.0  | 40.0  | 1.2  | 6.2  | 23.6  | 20.7  | −8.2  | 3.6  |
| Nigeria      | 62.0  | 49.0  | 46.0  | 35.0  | 9.3  | 2.2  | 27.2  | 21.9  | 6.3  | 2.4  |
| **Eastern Africa** |       |       |       |       |       |       |       |       |       |       |       |       |
| Kenya        | 79.0  | 72.0  | 59.0  | 54.0  | 5.1  | 5.4  | 24.9  | 34.1  | 1.7  | 3.6  |
| Tanzania     | 76.0  | 66.0  | 77.0  | 65.0  | 7.5  | 5.8  | 25.7  | 28.7  | 4.6  | 6.0  |
| Uganda       | 83.0  | 76.0  | 69.0  | 72.0  | 6.8  | 6.8  | 21.7  | 23.1  | 1.6  | 5.4  |
| **Southern Africa** |       |       |       |       |       |       |       |       |       |       |       |       |
| Malawi       | 85.0  | 83.0  | 80.0  | 76.0  | 5.4  | 4.4  | 34.7  | 25.5  | 3.6  | 4.3  |
| South Africa | 41.0  | 33.0  | 8.0   | 5.0   | 4.6  | 0.2  | 2.8   | 1.9   | 0.9  | 6.9  |
| Zambia       | 64.0  | 56.0  | 72.0  | 50.0  | 7.0  | 1.4  | 15.6  | 2.9   | 1.6  | 7.7  |
| **Central Africa** |       |       |       |       |       |       |       |       |       |       |       |       |
| Cameroon     | 52.0  | 43.0  | 63.0  | 43.0  | 6.8  | 3.7  | 15.5  | 14.5  | 7.9  | 2.6  |
| DRC          | 63.0  | 55.0  | 72.0  | 64.0  | 6.7  | 4.4  | 23.9  | 20.0  | 1.6  | 3.1  |
| **Northern Africa** |       |       |       |       |       |       |       |       |       |       |       |       |
| Morocco      | 45.0  | 37.0  | 46.0  | 33.0  | 4.8  | 2.5  | 13.2  | 12.2  | 4.5  | −4.6 |
| Average      | 65.3  | 57.4  | 59.4  | 46.9  | 5.8  | 4.1  | 21.0  | 18.8  | 2.4  | 3.6  |

Source: From World Bank Development Indicators. https://data.worldbank.org/indicator/NV.AGR.TOTL.ZS
Comprehensive Africa Agriculture Development Program (CAADP). Surprisingly, the poorest shares of government expenditures to agriculture were realized after the establishment of the CAADP in Africa.

The formal private FIs increased their lending to the agricultural sector by 160.9% over the period 2000–2019. The amount of credit allocated to agriculture was about US$16.2 billion in 2018, from US$6.4 billion in 2000, with a record level of US$16.7 billion in 2017 (FAO, 2021). On the other hand, the share of total credit granted to the agricultural sector in Africa was marked by a slight increase from 3.9% in 2000 to 4.3% in 2019.

In addition, donors’ commitments and disbursement have increased to support the governments’ weak capacity and the lack of interest of FIs. Specifically, donors’ disbursement amounted to US$4.7 billion in 2018, compared to US$888.6 million in 2000 and US$1.5 billion in 2004. With the food crisis of 2007–2008, donors accelerated their support to Africa, with average disbursements between 2007 and 2018 of US$3.6 billion, compared to US$1.4 billion before the crisis (2000–2006). Donors’ support to agriculture over 2006–2009 alone increased by 75.4%, indicating partners’ rising interest in agriculture.

Unfortunately, growth of agricultural financing noticed over the period 2000–2019 was not enough to compensate for the huge financing gap in agriculture. According to Dalberg (2018), there was a US$180 billion lending gap for agri-small and medium enterprises (SMEs) and farmers in sub-Saharan Africa in 2017. This financial gap limits the growth potential of the agriculture sector and the gap is likely to further increase as a result of the COVID-19 pandemic, with pernicious impacts on the rural and agricultural population’s income and significant long-term consequences for their livelihoods and food security (Dandonougbo et al., 2021; ISF & RAF, 2021; Morsy et al., 2021) and the potential of agricultural productivity (Table 2).
Low agricultural productivity—agricultural value-added per worker—seems to be one of the explanatory factors that tends to discourage the banks from supporting the agricultural sector. It is well known that Africa still lags behind other major regions. The agricultural productivity is about US$4035.3 per worker in the world, US$1998.9 in South Asia, and US$6771.3 in Latin America and the Caribbean. In Africa, after declining from US$1325.5 in 1991 to US$1267.8 in 2001, agricultural value added per worker has increased significantly since 2002 to reach US$1729.8 in 2019. Table 3 illustrates the average productivity and some differences between the African sub-regions. Progress is more significant in Northern Africa and Western Africa, whereas Southern and Central Africa did not perform well on average.

It is fundamentally well known that increased agricultural bank lending can boost agricultural productivity and profitability as well as average farm size. We test the correlation between agricultural financing (private and public) and agricultural productivity. Figures 3 and 4 show a positive association between the agricultural financing (private and public) and the agricultural value added per worker.

Comparison of Figures 3 and 4 suggests that the correlation is somewhat stronger with commercial FIs agricultural financing than with public agricultural financing. This means that more engagement from both private FI and

### TABLE 2
Agricultural credit (in %) of total domestic credit in selected countries (2004–2018)

| Country        | Volume of credit to agriculture (in USD million) | % change | 2004–2010 | 2010–2018 | Agricultural credit in % of total domestic credit |
|----------------|-----------------------------------------------|----------|-----------|-----------|---------------------------------------------------|
|                | 2004                                        | 2010     | 2018      |           | 2004                                            |
| Western Africa |                                             |          |           |           | 2010                                            |
| Côte d’Ivoire  | 113.9                                       | 71.9     | 479.2     | −20.4%    | 428.3%                                          |
| Nigeria        | 964.5                                       | 910.1    | 2362.9    | −5.6%     | 159.6%                                          |
| Eastern Africa |                                             |          |           |           | 2018                                            |
| Kenya          | 744.8                                       | 643.5    | 704.3     | −13.6%    | 9.4%                                            |
| Uganda         | 77.8                                        | 187.0    | 480.0     | 140.4%    | 156.7%                                          |
| Southern Africa|                                             |          |           |           | 2010                                            |
| Zambia         | 213.6                                       | 270.9    | 403.2     | 26.9%     | 48.8%                                           |
| Central Africa |                                             |          |           |           | 2018                                            |
| DRC            | 53.1                                        | 22.3     | 39.1²     | −57.9%    | 75.2%                                           |
| Northern Africa|                                             |          |           |           | 2004                                            |
| Morocco        | 2029.8¹                                     | 2619.9   | 3717.5    | 29.1%     | 41.9%                                           |
| Average        | 444.9                                       | 454.5    | 885.9     | 69.0%     | 107.4%                                          |

Source: Authors, based on FAOSTAT database (https://www.fao.org/faostat/en/#data/IC).

### TABLE 3
Average labor productivity “Agricultural value added per worker” in Africa (in constant 2010 USD)

|          | 1991–2000 | 2001–2010 | 2011–2019 |
|----------|-----------|-----------|-----------|
| Africa   | 1265.7    | 1362.7    | 1636.0    |
| Central Africa | 852.0    | 535.2    | 639.1    |
| Eastern Africa | 728.1    | 681.2    | 970.2    |
| Northern Africa | 3113.1  | 3864.0  | 5628.8  |
| Southern Africa | 1089.9  | 966.6  | 992.4  |
| Western Africa | 1809.5  | 2395.4 | 2833.0 |

Source: Authors’ calculation based on ReSAKSS Data http://www.resakss.org/ (accessed February 2022).
government will be very supportive, but that private financial sector commitment is more impactful due to its correlation with agricultural productivity. This indicates that increasing the amount of financing on supporting farmers can result in an increase in agricultural value-added per worker. But the sudden disruption due to COVID-19, by giving a blow to the financing dedicated to the agricultural sector, can potentially cause a stagnation, or decrease, of agricultural productivity.

3 | PREVIOUS CRISES AND AGRICULTURAL FINANCING TREND: ARE THERE ANY LESSONS FOR AFRICA?

3.1 | Previous crises and agricultural financing trend

International crises almost always have a negative impact on the agricultural sector, particularly on the financing dedicated to the sector (Calomiris et al., 1986; Liefert & Shane, 2009; Lin & Martin, 2010). As the world becomes more globalized due to widespread interconnectedness, capital movements within the financial and banking sector, disruption in exports or disruption in logistics, natural calamities, or economic protection measures taken by governments can be considered as potential channels to drive the impact of international crises on agricultural financing.

Figure 5 shows the trend of the volume of agricultural financing from FIs over 1991–2018 in the world and in Africa. One can notice the continued increase in agricultural credit, despite several phases of decline (Figure 5). Prior to COVID-19, the agricultural credit trend in Africa seems to follow that of the world, even though some particularities exist. Then, the annual growth rate seems more relevant for assessing the structural trend of the potential impacts of crises on agricultural financing (Figure 6). Figure 6 clearly shows periods of decrease which often tend to correspond to specific international crises. Among others, these periods correspond, respectively, to the Kuwait invasion (oil prices increased) and the European monetary system crisis (1990–1993), the Asian financial (change, financial market and banking sectors) crisis (1997), the stock market crisis of 2001–2002 (bursting of the Internet bubble) and economic disruption.
effects arising from the September 11 attacks (2001), world food crisis (2007–2008), financial crisis of 2007–2009, and the European sovereign debt crisis (2010–2012).

Figures 5 and 6 suggest that in the short term, the impact of crises translates into an almost automatic decrease in financing given behavior readjustment by private economic agents as well as public authorities, through economic and social policies, to redirect resources towards sectors that they deem to be priorities. In the medium to long term, there is a rebound in financing, sometimes very strongly. Depending on the nature of the crisis and its impact on the agricultural economy, the government reallocates resources to the agricultural sector with the support of FIs and development partners. It is mobilizing more resources, not only through banks and partners but also through the recovery of commodity prices. For example, in India, following the 2008 financial crisis, the government took special policy measures like farm credit packages and special agricultural credit plans to ensure adequate availability of credit.
to agriculture (Kumar et al., 2010). This helped maintain a stable financing to agriculture. Also, the food crisis of 2006–2007 saw India taking a number of initiatives, including the provision of subvention to enable lending institutions to advance credit to agriculture at a lower interest rate (Hoda & Terway, 2015). The same was observed in Thailand during the 1997 Asian financial crisis. The Thai government placed great premium on microfinance and/or agricultural credit as a means through which the country helped the rural poor and vulnerable recover from financial difficulties (Llanto & Badiola, 2009). Indeed, following the crisis, with the serious effect on farms’ ability to repay debts, the Bank for Agriculture and Agricultural Cooperatives (BAAC) increased its support (short-term loans and credit lines) by 14.4% between 1997 and 1999 (from 67.5 billion to 77.2 billion baht) to help mitigate farmers’ liquidity problems (Poapongsakorn et al., 2006).

Overall, what we observe is that when agriculture is considered as a priority sector in a country, significant resources are mobilized to keep the sector safe from the credit crisis, even if only in the short term, and then strengthen these measures as the crisis recedes. As a result, a more or less stable trend in the volume of financing can be observed, although downward pressure on credit growth to the sector is often noted.

4 IMPACT OF COVID-19 ON THE TREND OF AGRICULTURAL FINANCE AND GOVERNMENT RESPONSES

Looking back at the impact of the COVID-19 crisis, the pandemic affected both demand and supply, which worsen its effects to the economy. Border disruptions and anti-COVID-19 policy measures have impacted all stages of agricultural value chains, from input supply to production, distribution logistics, and consumption, elevating the risks of food insecurity, hunger, and malnutrition (Ibukun & Adebayo, 2021; Morsy et al., 2021). This has several implications, among which the increase in the reluctancy of FIs to allocate financial resources to the agricultural value chain. To analyze this point, we look at both the supply and demand side as well as the government responses.

In the absence of 2020 macro (or aggregate) data on the evolution of private financial credit to agriculture in the world and in Africa to examine how COVID-19 and the measures to limit its spread have affected financing to the agriculture sector in Africa, the study makes use of sectoral data provided at country level and of results of survey studies conducted recently at the farmer level to assess the effects of the COVID-19 pandemic.

4.1 FI side responses to COVID-19 and agricultural financing

The uncertainty associated with the COVID-19 pandemic has exposed African FIs to a severe adverse shock. The shortage in liquidity due to the difficulty in mobilizing funding and debt repayment became a major constraint on their

![Credit to agriculture sector WAEMU (XOF million). Source: Central Bank of West African States (2021) (BCEAO)](image-url)
activities. As most FIs are averse to risk, the event of COVID-19 contributed to further limit their lending to risky sectors such as agriculture. That is because the agricultural sector is generally largely perceived as a risky sector; a perception that has long affected its development (Food and Agriculture Organization 2020; ISF & RAF, 2021).

Figures 7–9 show with different perspectives the situation of agricultural financing in 2020 in the West African Economic and Monetary Union (WAEMU), in Ghana and in Uganda, respectively. In the case of WAEMU, the volume of credit to the agricultural sector has declined by 1.2% between 2019 and 2020, from CFAF 414.5 billion to CFAF 409.6 billion. There is a slight difference between short-term loans and medium-to long-term loans. The medium- and long-term credit tends to increase whereas short-term credit tends to decline, showing a sort of prudence or even risk aversion on the part of banks more interested in investment projects during this COVID-19 pandemic crisis.

In Ghana, the distribution of credit per sector shows a sharp drop in percentage points of the credit dedicated to the primary agricultural sector, relative to all other sectors considered (Figure 8). From 5.8% in 2019, the credit allotted to the agricultural sector accounts for only 3.7% of total credit in Ghana in 2020. Except for mining, the other sectors considered experienced an increase in their share of credit. These results may indicate that banks are less interested in the agricultural sector as a result of COVID-19. In the case of Uganda, based on the monthly flows, private financing for agriculture dropped suddenly in March 2020 and continued to decline until May 2020, before rising again and reaching

**FIGURE 8** Credit distribution per sector in Ghana (%). Source: Bank of Ghana (2021)

**FIGURE 9** Uganda-monthly financial private sector lending to agriculture. Source: Grant Thornton (2021) Uganda
a new peak in July 2020 before declining slightly until October 2020. Over the period considered, credit dedicated to the agricultural sector declined.

In the three selected cases, FIs seem to reduce credit to agriculture. The underlying effect of the general trend on agricultural finance from the FIs’ perspective is that FIs stopped servicing new clients or dropped to low levels, as a result of risks concerns and the near impossibility of conducting thorough due diligence without on-site visits being the main factors (Dokle, 2020). Despite central bank interventions and the fact that the situation is returning to normal, FIs remain reluctant as usual.

4.2 | The effects of COVID-19 on farmers’ activities

At the farmer level, several studies have been carried out to assess the impact of COVID-19 on agricultural actors. Nchanji and Lutomia (2021) underline these effects in a study conducted to scrutinize the regional impact of COVID-19 on the production and food security of common bean smallholder farmers in sub-Saharan Africa. Although with a qualitative perspective and limited number of observations per country, the cross-regional study found that on average (Burkina Faso, Cameroon, Kenya, Tanzania, Uganda, Zambia), 28.5% of bean farmers reported difficulties in accessing hired labor, 20.8% in accessing inputs and 21.4% in accessing credit from FIs. There is a large difference between countries. For example, 44.4% of Kenyan bean farmers face challenge in accessing credit from FIs whereas only 6.3% of Ugandan bean farmers do. On the contrary, 50.0% of Ugandan bean farmers face difficulties with inputs access, compared to 8.3% of Kenyan bean farmers.

This result is consistent with those obtained by Siddiqui et al. (2020) in Kenya where the authors attempt to understand the impact of the COVID-19 pandemic on farmers' needs, attitudes, perceptions, and behaviors. By carrying out two rounds of quantitative survey combined with qualitative interviews, they found that 93% of farmers experience a decrease in household income of 56% on average. This was due to lower off-farm income, higher transportation and input costs, lower commodity prices, and crop losses due to pests and diseases. As a result, 16% struggled to repay loans and 33% have missed repayments or stopped repaying their loans. This leads to the reduction of financial resources available to farmers, as only 22% of farmers were able to obtain loans, meaning that more than 75% of farmers did not have access to additional credit due to the demand for higher collateral, reduced loan amounts, delayed disbursements, and the high cost of credit. These findings are confirmed by Carreras et al. (2020) and Matenga and Hichaambwa (2021) who assess the impact of COVID-19 on local food systems and livelihoods based on 100 (Kenya), 114 (Malawi), 111 (Nigeria), 102 (Tanzania), and 115 (Zambia) small-scale farming households, respectively. On average, the authors find that several farm households experienced difficult access to commercial loans (40%) and concessionary loans (34%) (Figure 10). There is also a significant difference between countries such as Zambia (commercial loans [59%] and concessionary loans [62%]) and Tanzania (commercial loans [24%] and concessionary loans [9%]).

![Figure 10 Decrease in services availability for agricultural production across countries. Source: Carreras et al. (2020) and Matenga and Hichaambwa (2021)](image-url)
The various converging results support the hypothesis of the difficulty to access credit during COVID-19 and also the possibility of resources being diverted from the agricultural sector to other priorities, especially in the case of Zambia where only 72% of farmers suffered from difficulty accessing concessionary loans. With disruption across the agricultural value chains, many farmers became more vulnerable as compared to pre-COVID-19, exacerbating inadequate access to finance and limited market linkages (Andrade et al., 2021; Siddiqui et al., 2020). Subsequently, farmers demand more government support, including access to new fair loans and subsidized inputs, marketing assistance, and training (Siddiqui et al., 2020). They need cash or working capital as well as resources to invest, while FIs need to innovate in lending policy, loan availability and accessibility, and even in loan costs (Ayanlade & Radeny, 2020; Christensen, 2020).

4.3 Government responses to COVID-19 crisis

In several African countries, with the support of bilateral and multilateral development institutions such as the African Development Bank and the World Bank, governments took various urgent initiatives such as targeted cash transfers and subsidies for vulnerable households as well as subsidies and tax relief for businesses. According to Raga (2020), the average of the economic stimulus measures in sub-Saharan Africa countries was just over 2% of GDP, well below the G20 countries’ stimulus measures of 18% of GDP. Although some financial and non-financial measures affect more formal private sector companies, in general they are short term and many enterprises and business actors, particularly in the agricultural sector have not had access to these measures (Matenga & Hichaambwa, 2021; Oxford Committee for Famine Relief, 2020). That is, most intervention packages have not been adequately designed to specifically target the agricultural sector. Therefore, Christensen’s (2020) question of “Where is the COVID-19 stimulus for the smallholders who feed the world?” was very relevant given the contribution of smallholder farmers to food security. According to Christensen (2020), few COVID-19 stimulus measures reached farmers.

In general, at the beginning of the crisis, measures for the agricultural sector were indirect and linked to fiscal relief, cash transfers to vulnerable menages and loan maturities extension (Table 4). Almost nothing has been done to maintain or improve the financing of the sector which was already very weak before the crisis. More generally, with the crisis, the government priority was oriented towards the safety net and social protection and the economies’ recovery by focusing on the industry sector (manufacturing, pharmaceuticals). This means that much of the national budget dedicated to the agriculture sector was likely diverted to other sectors. However, over time, in some countries such as Nigeria and Kenya, government policies to combat the COVID-19 crisis have included specific subsidies for inputs and agricultural insurance as a means to mitigate the impact of COVID-19. In general, these measures were targeted at existing farmers, including women and youth.

The above analysis is globally supported by the data in Table 5. Following the COVID-19 outbreak, public financing dedicated to the agricultural sector has declined slightly in Africa in terms of volume or amount (a reduction of about US$200 million) and share of total expenditure (a reduction of about 1 percentage point) compared to 2019 statistics. There is also a difference between African sub-regions and countries. In terms of volume of financing, there is a slight reduction in Southern and Western Africa, while in Central, Eastern and Northern Africa, governments appear to be a touch increasing their expenditure on agriculture. Except Northern Africa, the share of government agricultural expenditure tends to decline in the different subregions. This analysis suggests that, after delays in readjustments, governments have made efforts to finally maintain a level of financing for the sector. In most cases, government responses have been based on existing resources. Though some funding projects predate COVID-19, they have often been restructured to respond to current food emergencies by using a variety of instruments as outlined in Table 4.

Moreover, when targeted instruments exist, they do not always seem to be well tailored. For example, in the Siddiqui et al. (2020) study, farmers rate the effectiveness of government policies and measures (Figure 11): 81% and 65% were satisfied with inputs subsidies (fertilizers, seed) and tax rates reduction measures, respectively. But only 39% and 19% of farmers consider the measures of loan terms extension and temporary suspension of the registration of defaults by the credit reference bureaus as effective, respectively. This suggests that more than 60% of farmers were probably not satisfied and expected other financial measures to mitigate the COVID-19 effects. This and previous findings point toward the need to better understand the link between the crisis and farmers’ needs and how to better manage it with appropriate financial and non-financial instruments.
| Input grant or subsidies (fertilizers, seed) | Social insurance program | Payment delayed or fiscal tax reduced | Extension of loan terms | Social protection or cash transfer benefits to vulnerable sections | Temporary suspension of credit repayment or deferral of payments | Agri-disaster fund | Training and extension services | Exemption from movement medical services, food retailers, and financial service restrictions | Moratorium on farmer loans | Reduction of interest rate of loans to agriculture (existing programs) | Grain purchase programs | Set up minimum grain price | Leveraging digital technologies | Develop information and data system | Augmenting budget dedicated to agri-sector | Revised upwards transactions and balance limits |
|-------------------------------------------|--------------------------|-------------------------------------|-------------------------|-------------------------------------------------------------|------------------------------------------------------------------------------------------------|------------------|-------------------------------|----------------------------------------------------------------------------------|-------------------------------|---------------------------------------------------------------|-----------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------------------------------------|
| Burkina Faso                              | ++                       | -                                   | +                       | +                                                            | +                                                                                               | -                | -                             | -                                                                                | -                             | -                                                                             | -                           | -                               | -                               | -                               | -                               | -                               |
| Côte d’Ivoire                             | -                        | -                                   | +                       | -                                                            | -                                                                                               | -                | -                             | -                                                                                | -                             | -                                                                             | -                           | -                               | -                               | -                               | -                               | -                               |
| Nigeria                                   | ++                       | -                                   | -                       | -                                                            | +                                                                                               | -                | -                             | ++                                                                               | +                             | ++                                                                            | -                           | -                               | -                               | -                               | -                               | -                               |
| Kenya                                     | ++                       | ++                                 | +                       | +                                                            | +                                                                                               | -                | -                             | -                                                                                | -                             | +                                                                             | -                           | -                               | -                               | -                               | -                               | -                               |
| Malawi                                    | ++                       | -                                   | -                       | -                                                            | -                                                                                               | -                | -                             | -                                                                                | -                             | -                                                                             | -                           | -                               | -                               | -                               | -                               | -                               |
| South Africa                              | -                        | -                                   | -                       | ++                                                           | -                                                                                               | -                | -                             | -                                                                                | -                             | +                                                                             | -                           | -                               | -                               | -                               | -                               | -                               |
| Tanzania                                  | -                        | -                                   | -                       | -                                                            | -                                                                                               | -                | -                             | -                                                                                | -                             | ++                                                                            | -                           | -                               | -                               | -                               | -                               | -                               |
| Uganda                                    | ++                       | -                                   | -                       | -                                                            | -                                                                                               | -                | -                             | -                                                                                | -                             | +                                                                             | -                           | -                               | -                               | -                               | -                               | -                               |
| Zambia                                    | -                        | -                                   | -                       | -                                                            | -                                                                                               | -                | -                             | -                                                                                | -                             | -                                                                             | -                           | -                               | -                               | -                               | -                               | -                               |

Source: various sources. NB: +: general (all businesses); ++: specific to agri-sector.

*a*We assume that this list is not exhaustive.
5 | CONCLUSION AND POLICY IMPLICATIONS

This study examined the potential effect of COVID-19 on agricultural financing by drawing lessons from past global crises and their link to the agricultural financing. Analysis at the macro, sectoral and farmer levels confirms the decline in the financing allotted to the agricultural sector in Africa, which could exacerbate the existing structural gap in agricultural financing. Many policy responses and stimulus packages that have been designed are found to be insufficient to address the negative effect of the pandemic. To revive the agricultural sector, greater financial support from government, FIs and the private sector is needed to meet short-term and medium-term financing needs. In this
regard, governments should accelerate economies’ structural change—agriculture transformation, industrialization, digitalization, and so on—to facilitate generation of more sustainable and long-term resources required to finance the agricultural sector development and modernization. Better understanding of the magnitude of the agricultural sector financing and investment needs to propose appropriate complementary responses is needed. In the face of such a crisis, short-term resources such as emergency funds, and long-term resources such as guarantee funds and more suitable insurance products combined with social safety nets, all in favor of farmers will be helpful to sustain farmers’ livelihoods and food security. Specifically, governments should pay attention to the following recommendation.

5.1 Establishing an agri-disaster fund or emergency funds

To tackle the short-term financial needs of smallholders and the rural population, as has been done in South Africa, is recommended for many African countries to assist financially distressed small-scale farmers to ensure continued production and food security (Popoola & Yusuf, 2021). This fund has several advantages as it is constituted during normal operating periods to anticipate any specific crises and is activated to the urgent needs of farmers’ mechanisms. But for the fund to be effective, it must be inclusive and its modalities flexible to facilitate access to as many farmers as possible in the event of such a crisis.

5.2 Regenerate access to long-term finance for operational and investment perspective

5.2.1 Provision of long-term concessional resources

As sustainable growth of agriculture is constrained in Africa by limited long-term financing, delaying its development and modernization, it is fundamental to increase sustainable access to long-term financing to the agricultural sector to help unlock its development potential across all stages of agricultural value chains. As capital market is not sufficiently mature and structured, governments in Africa should facilitate and increase access to more subsidized resources with a longer maturity. Facilitating long-term resources offers more opportunities for FIs to diversify their financial products and services. FIs, particularly agricultural banks, must have privileged access to these long-term resources due to the long-term requirement of most agricultural assets. These lenders could consider the crisis as an opportunity to employ long-term strategies that can help the agricultural sector (farmers, agri-SMEs, and other stakeholders) grow into resilient institutions (Dokle, 2020).

5.2.2 Channels for long-term resources allocation

The main purpose of accessing long-term resources is to meet the investment needs (factors of production such as land and land development, mechanization, irrigation tools, storage facilities, warehouse construction, logistics to access markets, etc.). As the crisis may have exacerbated the difficulties of FIs in tackling these needs, Andrade et al. (2021) suggest prioritizing cash flow for operations, building capacities for adaptation and providing targeted funding that could directly mitigate the impact of shocks at different levels. To this effect, it should be important for interested FIs to carry out a restructuring of their agricultural loan portfolio while finding alternative modalities to increase resources to smallholder farmers with limited collateral assets. Some examples of alternatives exist. For example, matching grants projects in agriculture can be more smartly supportive for investments in infrastructure and agricultural productive assets in two ways to promote farmers’ access to resources: matching grants blended with credit for segments with some access to formal financial services, and matching grants incentivizing savings for segments with no access to financial services (FAO, 2020; Sbero-Kessler, 2019). By focusing on financial support via blended finance, governments could help de-risk long-term resources to agricultural players in addition to technical assistance tools to respond to the current and future crises (FAO, 2020). Similarly, FIs should look at innovative assets-based collateral loans that are emerging in developing countries, using existing stocks as collateral, or using future (pre-harvest) production as a guarantee for financing. These systems based on pledges of future harvests lead to the creation of a type of register that makes it possible to track loans granted to farmers.
5.3  |  Improve the agricultural sector by reinforcing the eco-system around agriculture financing

5.3.1  |  Agricultural risk profiling and risk-sharing tools

As FIs become more risk-averse, governments should assist them with developing and implementing agricultural risk profiling and risk-sharing tools. One step is to develop a comprehensive risk management strategy to facilitate credit access aimed at making farmers more bankable. Andrade et al. (2021) suggest the use of SCOPEinsight bankability metrics that can create more visibility for all stakeholders and allow comparison through common standards. At the same time, governments should support farmers with business development assistance that builds on a high level of knowledge of value chains and challenges to help them overcome financing barriers and be better equipped to deal with future risks and shocks (Dokle, 2020). This also requires investing in risk-sharing mechanisms—such as Nigeria incentive-based risk sharing system for agricultural lending in Nigeria or Ghana incentive-based risk sharing for agricultural lending project in Ghana—which can help reduce individual exposures to risks. Widespread use of credit guarantee mechanisms—that can help to remove constraints to credit expansion by absorbing part of the borrowers’ risk of default—can encourage investors to take higher risks, can help sharing risks through tripartite contracts involving, for example, cooperatives or agri-industries seeking to secure their supply of agricultural products. Hence, in the interested FIs perspective, it is also important to conduct stress tests and risk analyses and to implement a contingency plan to prevent future shocks and increase the capacity of rapidly adapting their activities for continued support to farmers. To this end, liquidity tests based on some assumptions of likely default rates are needed to apprehend FIs’ capacity to withstand the impact of current and future crises.

5.3.2  |  Digital agri-finance

Also noteworthy is the development of the digitalization, with government assistance, for financial instruments (credit, savings, insurance, payment, remittances) as a tool for the development of resilient financing for agriculture. Indeed, the use of technology has recently increased dramatically among the rural population with swift and early adoption across various levels of staff and clients (Andrade et al., 2021). As in many other sectors, remote business modalities driven by COVID-19 have accelerated digitalization in the agricultural sector. FIs will need to follow suit and accelerate the implementation of innovative ways to maintain and expand their businesses, as well as to make and receive payments (Zeufack et al., 2021). Given that on-site visits are problematic in times of certain crises and the need to reach more difficult audiences, governments should enable the acceleration of the development of digital technologies across agricultural value chains for input distribution, as in Nigeria (e-wallet) and output markets.

5.3.3  |  Agri-insurance

The COVID-19 crisis is an opportunity to accelerate and strengthen the development of agricultural insurance such as index insurance in Africa. Various initiatives exist in Africa involving the private sector and government institutions. However, after years of dissemination in some countries, farmers’ take-up remains low. This low uptake is partly explained by the low level of local and social learning and the farmers’ mistrust, which can be explained by an expectation of gain deemed too uncertain, especially compared to more common and better controlled mechanisms. It is important to better understand farmers’ needs, particularly in the context of growing uncertainties, by providing locally fitting products which can be seen as a source of motivation for farmers to adopt insurance coverage. In turn, farmers will be better prepared for and more resilient to similar pandemic-related shocks (Andrade et al., 2021) and the FIs’ loan portfolio will be partly secured. However, it would make sense to develop more integrative insurance products to help manage more than one risk at the same time. For example, an insurance policy covering disease risks, and climate or natural disasters will be more impactful and incentive based. The more holistic the coverage of the insurance policy, the better the resilience to future crises and the greater the incentive to use the insurance.
5.4 | Enhance the relationship between agri-players and FIs

Re-boosting the agricultural sector development involves the necessity to reinforce the proximity between agricultural stakeholders, borrowers, and FIs in order to increase mutual trust and partnership. The purpose is to create an environment of better mutual understanding and expectations, leading to the potential design of better adapted products and services that contribute to reduce risk and generate goodwill during more difficult times (Andrade et al., 2021). This could facilitate channeling more resources through incentivized local, accessible, and market-oriented FIs, which would be incentivized to provide affordable loans to farmers, as well as to more vulnerable targets, including women and youth. For instance, the possibility of participating together at meetings, specialized training sessions and focus groups will contribute to ease the relationship between agri-players and FIs. Like farmers, FIs need to be trained on this issue and this would create a significant difference in making agriculture the most promising sector for various stakeholders, including women and young people.

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ENDNOTE

1 https://data.worldbank.org/indicator/NV.AGR.EMPL.KD?locations=1W-EU-8S-ZG-XU-ZJ-4E-B8

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