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SUDAN ECONOMIC UPDATE

# Missed Opportunities amidst Deepening Fragility



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Report Design: Ha Doan  
Cover/Illustrations: Ha Doan & Yen Doan

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# Acknowledgements

The Sudan Economic Update (SEU) is a World Bank report series that assesses key economic developments, prospects, and policies in Sudan. The Update is intended for a wide audience including policy makers, business leaders, the community of analysts and professionals engaged in economic debate, and the general public. The Economic Update series includes a section on recent economic developments and outlook, followed by a thematic section analyzing issues of particular importance. The thematic section of this edition of the SEU assesses shocks to the economy prior to the April 2023 conflict, including the COVID-19 pandemic and the 2021 October military takeover along with the adverse impact on households. The SEU highlights the urgent need to end the recent conflict, facilitate reconstruction, support the poorest groups, and support a recovery of the private sector.

The SEU was prepared under the overall guidance and supervision of Ousmane Dione (Country Director), Milena Stefanova (Country Manager), Hassan Zaman (Regional Director for Equitable Growth, Finance and Institutions), Asad Alam (Former Regional Director for Equitable Growth, Finance, and Institutions), Marco Hernandez (Practice Manager), and Tehmina Khan (Program Leader and Lead Economist).

The team that produced the SEU was co-led by Kene Ezemenari (Senior Economist), Abdoulaye Ouedraogo (Economist), and Fang Guo (Economist). The team included Alzaki Alhelo (Consultant-Economist); with inputs on the financial sector from Saef Mustafa (Economist, Extended-Term Consultant). Eiman Osman (Consultant-Economist), Ando Rahasimbelonirina (Consultant-Economist), and Franck Adoho (Senior Economist) prepared Part II of the SEU, based on the Sudan High-Frequency Phone Survey data collected between June 2020 and August 2022 (in seven rounds). Peer reviewers were Sashana Whyte (Senior Economist) and Ayago Wambile (Senior Economist). Aimn Hassan provided administrative and logistical support during the preparation of the report. Diane Stamm provided editorial support. The report was designed by Ha Doan and Yen Doan.

# Abbreviations

CBS	Central Bank of Sudan
DSA	Debt Sustainability Analysis
GDP	gross domestic product
HFS	High-Frequency Phone Survey of Households
HIPC	Heavily Indebted Poor Country
IMF	International Monetary Fund
LG	local government
MoF	Ministry of Finance
MoH	Ministry of Health
MoTI	Ministry of Trade and Industry
NGO	nongovernmental organization
OCHA	United Nations Office for the Coordination of Humanitarian Affairs
PEFA	Public Expenditure and Financial Accountability
PFM	Public Financial Management
RSF	Rapid Support Forces
SAF	Sudanese Armed Forces
SD	Sudanese pound
SEU	Sudan Economic Update
SMP	Staff-Monitored Program
SOE	state-owned enterprise
SST	State Sponsor of Terrorism
SSTL	State Sponsor of Terrorism List
US\$	United States dollar
WHO	World Health Organization



## Overview and Context

## **Sudan failed to leverage oil resources during the 2000s for inclusive growth and resilience; the subsequent loss of three-quarters of these resources in 2011 was a major economic shock**

**Oil windfalls during the 2000s were largely squandered, with Sudan failing to build the foundations of a non-oil economy.** During the oil boom years (1999–2010), higher export receipts (largely from oil) and revenues, and investments in physical infrastructure buoyed the economy. However, Sudan’s over-reliance on a single commodity as the key source of growth, neglect of the non-oil sector, widespread governance challenges alongside increased dominance of the public sector (that grew from 6 percent to 40 percent of GDP, between 1998 and 2008), increased the country’s exposure and vulnerability to shocks. Political challenges continued to foment during this period, reflecting Sudan’s legacy of persistent spatial disparity between the center in Khartoum and periphery states/regions. The resulting increase in macroeconomic vulnerabilities and social fragility were exacerbated by the 2011 South Sudan secession. Sudan lost 75 percent of its revenues and most of its crude oil exports, while U.S. sanctions caused foreign investment to dry up.

**As part of the sanctions, the country was designated as a State Sponsor of Terrorism (SST), which restricted foreign assistance and debt reduction, resulted in isolation from the global financial system, and banned military exports.** As a result, Sudan’s major export destination switched from the EU to China and Japan. Central Bank of Sudan data showed that after sanctions, exports to the EU (as a share of total exports) declined from 38 percent in 1997 to 0.4 percent in 2007. During the same period, exports to China rose from 2.8 percent of Sudan’s total exports to 81.8 percent. Similarly exports to Japan (the next major destination) increased from 3.7 percent to 8.5 percent. After 2011, gold exports gradually replaced oil as the key driver of overall export growth until 2022 (when cotton exports became more dominant). During these years, macroeconomic mismanagement, massive inflation, currency devaluations, ballooning subsidies, and international isolation from both trade and financing led to US\$56.2 billion in external debt. GDP growth averaged just 1.7 percent during 2013–18, exacerbating social tensions amid rising economic hardship. The U.S gradually eased sanctions from 2017 and removed Sudan from the State Sponsor of Terrorism List (SSTL) in December 2020.

## **Attempts in 2019 to turn the tide via a brief transition to civilian government, transformational reforms, and the beginnings of a fragile economic recovery were derailed by a military takeover**

**Hopes that the 2018–19 revolution would lead to a comprehensive shift in the country’s economic, social, and political trajectory were short-lived.** Months of civil disturbance and protests eventually led to the collapse of the 30-year Bashir regime in 2019 and a transition government (comprising military and civilian stakeholders) in August 2019. Comprehensive reforms to stabilize the economy, increase social sector spending, and receive debt relief were outlined in the 10 Priority Areas of the 2019 “Sudan Economic Revival Program, 2019–2021.” The latter was the foundation for the Poverty Reduction Strategy Paper (2021–2023) submitted by the government to the World Bank and IMF to fulfill the Enhanced Heavily Indebted Poor Countries (HIPC) Initiative’s poverty reduction strategy requirement.

**Reforms were prioritized to address weaknesses in the PFM system, contain excessive spending, and stabilize the exchange rate, paving the way for HIPC debt relief.** The 2020 Public Expenditure and Financial Accountability (PEFA) identified weaknesses in Sudan’s PFM system, particularly the quality and timeliness of data, lack of an organized structure of checks and balances, and absent or insufficient publication of information and transparency of procedures. Also, local governments (LGs) are not given budget ceilings for planning but instead are informed of their allocations after budget approval, which are not disclosed publicly, preempting the ability of LGs to compare their allocations. The PEFA also

noted limited implementation of the medium-term fiscal framework, treasury single account (including weak cash forecasting; extending the setting of cash ceilings for ministries, departments, and agencies from one to three months; and improving management of payments). In addition, the Auditor General's reports had little if any traction or publicity, despite the challenges and inefficiencies identified in Sudan's fiscal governance. Audit reports noted the high inefficiency and lack of transparency of the large state-owned enterprise (SOE) system that was characterized by preferential allocation of contracts and contingent liabilities. Fiscal risks from SOEs are compounded by Sudan's complex and opaque tax system, which undermines the ability to raise revenues.

**A system of multiple exchange rates and an informal parallel market contributed to macroeconomic instability.** In September 2020, the parallel market exchange rate was SDG 169 to US\$1 compared to the official rate of SDG 55 to US\$1, representing a percentage difference (or premium) of 66 percent. However, after unification of the official and parallel exchange rates in February 2021, the premium declined to 2.1 percent between March and December 2021. Liberalization of the exchange rate contributed to a tripling of the inflow of remittances through formal channels. In October 2019, the Government increased diesel and gasoline prices to market rates and changed institutional arrangements in mid-2021 to allow for more flexible market pricing of fuel. Residential electricity rates for large consumers were also increased to be more cost-reflective while protecting poorer consumers.

**In addition, reforms were initiated to strengthen and eventually scale up the social protection system.** The Family Support Program was launched on February 24, 2021, and by June 7, 2021, had enrolled 692,978 families in five states, of which 120,000 had received payment. These reforms were to help moderate consumption and incentivize investments in alternative clean energy sources that are more environmentally sustainable. As a result, Sudan reached the HIPC Decision Point in June 2021 following arrears clearance from multilateral institutions). Under the HIPC initiative, creditors agreed to reduce Sudan's debt by more than US\$50 billion, representing over 90 percent of Sudan's total external debt if it reaches the HIPC Completion Point (which was to take place in three years, at that time).

**Sudan is estimated to have lost US\$2 billion in foreign inflows annually since the October 2021 military takeover.** Foreign inflows, particularly external grants, were paused once the military took over in October 2021. Sudan lost US\$1 billion in forgone foreign assistance and FDI in 2021 alone, compounded by international commodity price shocks and localized flood damage to agricultural crops. To address revenue shortfalls, the government compressed food and wheat subsidies, and imposed highly distortionary tax increases, fees, and duties that severely dragged on private sector activity and incomes.

### **Political instability contributed to further weakening an already fragile economy**

**A challenging political context, on the heels of the COVID-19 pandemic, led the economy to contract for the fifth year in a row in 2022, marking a cumulative decline of 11.3 percent since 2018.** The economy is estimated to have contracted by 1.0 percent in 2022 following a 1.9 percent GDP decline in 2021. The lower GDP contraction was due to some improvement in agricultural harvests during the 2021/22 season, livestock production, and cotton exports, which partially offset a significant contraction in services and private consumption. Inflation slowed from triple-digit levels to a relatively high 87.3 percent in December 2022 due to reduced money printing to finance the fiscal deficit. Nevertheless, price pressures persisted as subsidies were reduced, taxes increased, some deficit monetization continued, coupled with high global food and fuel prices. Increased spending on public wages helped offset cost-of-living pressures for public servants, but widened the fiscal deficit from 0.3 percent in 2021 to 1.7 percent of GDP in 2022. Continued tax hikes, higher fuel transit tariffs, and customs duties,

raised revenues and grants by 104.3 percent in 2022 but further compressed demand and private sector activity.

### **The conflict that erupted in April 2023 is expected to set Sudan's development back several decades**

**A fresh effort to support a new transition to democracy was more fleeting compared to earlier attempts, giving way to the April 2023 conflict.** A framework for transition to a new civilian administration was signed in December 2022, with elections planned for two years later. However, mounting tensions between the Sudan Armed Forces (SAF) and the Rapid Support Forces (RSF), delayed the return to a civilian transitional government. Conflict that erupted in April between the SAF and RSF destroyed the industrial base; physically damaged some banks and the central bank; halted services including wholesale/retail sales, restaurants, and financial and ICT services; and damaged several education and health facilities. The 2022–23 agriculture harvest season had largely passed by April 2023. However, expected damage to the upcoming planting season for 2023–24 is expected to be more severe, given displaced labor, and limited seeds, fertilizer, and financing.

**Disruption of agricultural supply (in domestic markets), and the main exports (gold, sesame, gum Arabic, and livestock), will also be greater.** These impacts are expected to significantly reduce consumption and production, devastating the marketed surplus and income of agricultural households, which account for around 44 percent of the labor force. The end-July 2023, United Nations Office for the Coordination of Humanitarian Affairs (OCHA) Sudan Situation Reports estimated that over 3.5 million people have been displaced since April 15, including the 2.7 million displaced inside the country and the 823,000 that have crossed into neighboring countries. Overall, the economy is expected to contract by 12 percent in 2023. The economic contraction is expected to slow to roughly 0.2 percent on average between 2024 and 2025, as households and firms adjust to the crisis.

**The broad destruction of the economic base will set the country back several decades.** Deepening fragility of the state and its declining ability to deliver basic services is expected to prolong reconstruction efforts and recovery from the conflict when it ends. The conflict, coupled with compound shocks in prior years, has also compromised household resilience. Part II of this SEU outlines the channels by which households have been impacted by shocks from the COVID-19 pandemic, the 2021 military takeover, and climate. COVID-related work stoppages reduced labor income more for women than for men, particularly in the rural areas and service sector. Two years after the pandemic, respondents reported the political situation arising from the military takeover was among the top three reasons for work stoppage. Households, particularly poor households, also experienced a decline in remittances and transfers after the October 2021 military takeover. Climate shocks, such as droughts, floods, and erratic rainfall, exacerbated an already dire situation for Sudanese households. The World Food Program estimated 34 percent of the Sudanese population (or over 16.2 million people) were food insecure as of Q1 2023, which is the same level as Q1 2022, but 7 percent higher than Q1 2021 levels. More recent estimates are that 39 percent of the population (or 19.1 million people) may become food insecure in the next one to four months.

**To cope, households have adopted detrimental and ineffective strategies, such as reducing consumption.** Households also switched jobs to make ends meet, with many shifting from farm to nonfarm or wage-earning activities. Social assistance programs were nearly nonexistent prior to the current conflict, as only 1 percent of households reported receiving any form of social assistance. With the recent conflict, the situation has become even more dire, highlighting the urgent need to quickly resolve the conflict, return to political stability, and resume critical reforms needed to get the country back on track to building the foundations for inclusive and resilient growth.

## Part I Recent developments – an increasingly weak economy



Real growth fell by an estimated 1.0 percent in 2022, the fifth consecutive decline since 2018, resulting in a cumulative contraction of 11.3 percent between 2018 and 2022.



Despite declining inflation, food shortages kept inflation elevated at 87 percent (year on year) in December 2022.



The fiscal deficit widened due to a higher wage bill and transfers aimed at mitigating the effects of inflation.



The current account deficit, financed by reserve drawdowns, remained relatively stable due to gold, livestock and cotton exports, remittance inflows, and repressed demand.

## Part II Special topic: Six Messages about Deepening Household Fragility and Poverty in Sudan



Households were severely hit by shocks from COVID-19, the 2021 military takeover, droughts, floods, and erratic rainfall.



COVID-19 and the military takeover reduced employment and labor income, particularly for women and rural residents.



Households, particularly poor households, also experienced a decline in remittances and transfers following the October 2021 military takeover.



Droughts, erratic rainfall, and high prices exacerbated an already dire situation for Sudanese households.



Households adopted detrimental and ineffective coping strategies, including reduced consumption and a shift from farm to nonfarm or wage-earning activities.



A quick end to the conflict, return to political stability, reforms, and investments are critical for inclusive growth and resilience



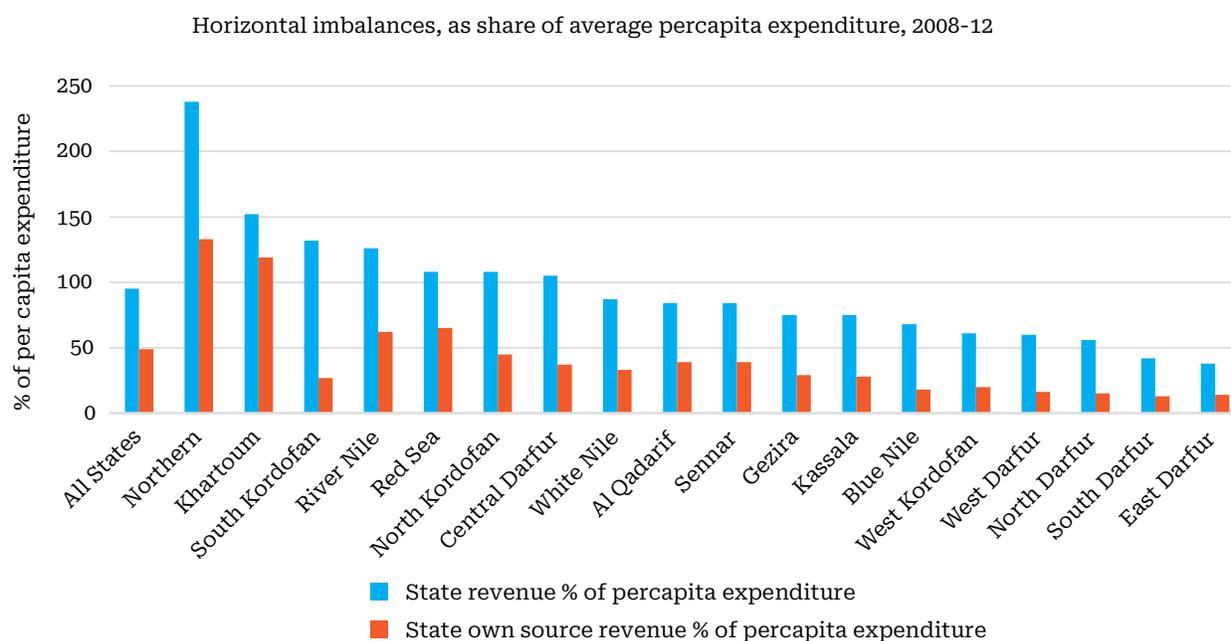
**PART I:  
Recent Developments –  
An Increasingly Weak Economy**

The pause in external grants and related austerity measures contributed to a contraction in economic activity, despite some improved performance in the agriculture sector in 2022. Higher global prices combined with localized climate shocks deepened food insecurity and extreme poverty. Inflation continued to slow, in response to reduced monetization of the fiscal deficit, although overall levels remained very high. Lower inflation partially offset depreciation pressures from the pause in external financing and resulting scarcity of foreign exchange. The current account deficit remained relatively stable due to strong exports, remittance inflows, and repressed domestic demand. But the fiscal deficit widened due to a higher wage bill and transfers (to mitigate the impact of higher prices on civil servants).

## Economic activity continued to deteriorate, amidst political instability

**The political impasse during 2022 severely impacted the Sudanese economy.** Historically, a key source of tensions has been attributed to the disparity between Khartoum and the rest of the country, with very little earnings from natural resources allocated to services in the regions (Figure 1). The resulting political instability has disrupted trade and food distribution channels, including through blockades of some national trade routes. The October 2021 military takeover gave rise to more protests against the military, resulting in paused external assistance that is estimated to have cost Sudan US\$1 billion in forgone foreign assistance in 2021. Prior to the April 2023 conflict, forgone external grants were estimated at roughly an additional US\$2 billion per year in the medium term (over and above estimations after the military takeover). This contributed to foreign exchange shortages, and precipitated significant fiscal tightening by the Government, both of which further dragged on the real sector.

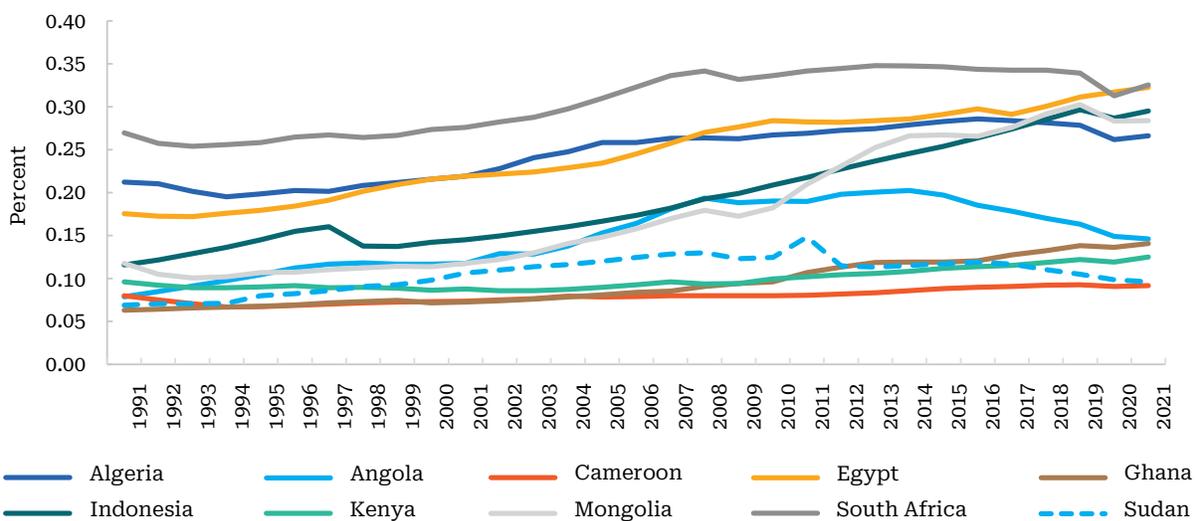
**Figure 1. Significant imbalances in resource allocation have existed across states**



Source: Logan et al. (2021), Figures 25 and 26.

**Forgone external grants and limited investments reinforced structural impediments that have undermined Sudan’s growth prospects.** Sudan’s GDP per capita relative to the United States was on a slight upward trend between 1990 and 2011, when the secession of South Sudan disrupted the beginnings of a growth convergence (or catch up). Despite its rich natural resources, ongoing conflict and structural impediments (in terms of political challenges, weak governance, and capacity to implement reforms) have kept Sudan from achieving the strong growth and income convergence experienced by its aspirational peers. For example, countries such as South Africa, Egypt, Mongolia, and Indonesia have experienced an increasing trend in their GDP per capita relative to that of the United States (Figure 2). In contrast, since the secession of South Sudan in 2011, Sudan’s GDP per capita relative to the United States has been on a declining trend (Figure 2), reflecting a deterioration in living standards for Sudanese households.

**Figure 2. GDP per capita relative to the United States: Sudan and peers**



Source: World Economic Outlook April 2023 Database

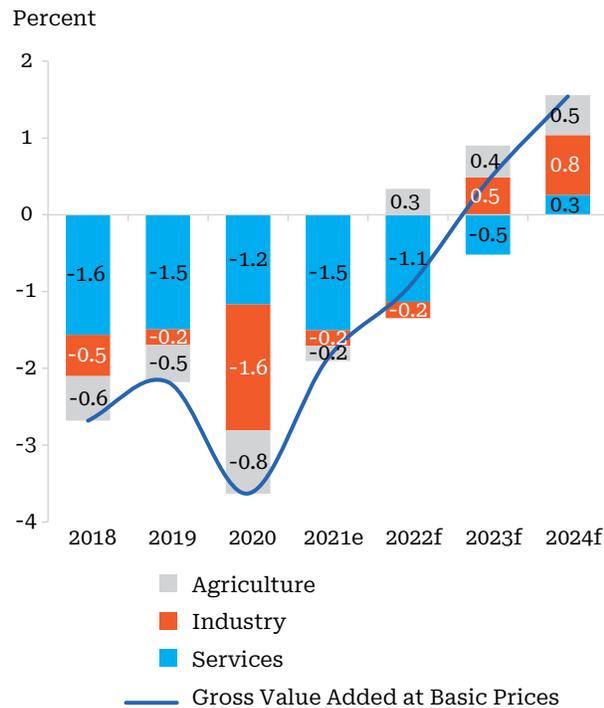
Note: GDP per capita (constant prices, PPP, 2017 international dollars) for Sudan is estimated after 2011; GDP per capita for Angola is estimated after 2017; GDP per capita for Algeria and Kenya is estimated after 2019.

**Headwinds arising from global commodity price shocks, as well as political and economic uncertainty, further depressed growth in 2022.** GDP contracted by an estimated 1.0 percent, a slower pace of decline compared to contraction of 1.9 percent in 2021 (Figure 3). The smaller contraction in 2022 was driven by livestock production and gold exports. Floods, high input costs, and limited financial support reduced cereal production (sorghum, millet, and wheat for the 2021/22 season) by 35 percent compared to the previous year, but this was partially offset by increased livestock production. As a result, agricultural production contributed 0.3 percentage points to growth in 2022, compared to an average annual negative contribution of 0.5 percentage points over 2018 to 2021. Prior to the April 2023 conflict, indications were that crop production was improving and that overall national cereal production for the 2022/23 cropping season was higher than the previous year and near the five-year average despite reductions in the area planted. This was due to better yields (led by improving weather conditions) as well as a rotation into less resource-intensive crops (like sorghum and millet, in response to the high costs of cash crop production, including wheat<sup>1</sup>).

1 ReliefWeb: <https://reliefweb.int/report/sudan/sudan-key-message-update-staple-food-prices-are-declining-remain-significantly-above-five-year-average-january-2023>.

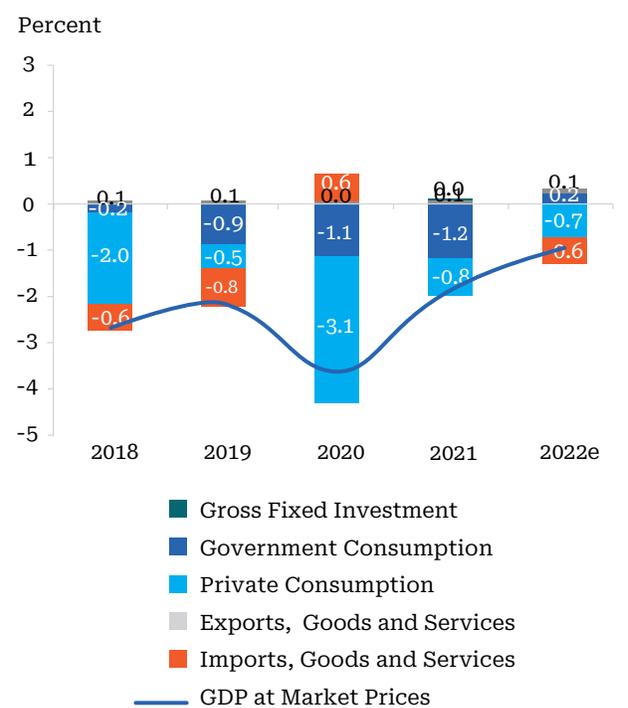
**The Sudanese pound (SDG) remained stable through 2021 despite the pause in external inflows and heightened political instability, helped by several factors including reduced deficit monetization by the Central Bank of Sudan,<sup>2</sup> and the closure of Port Sudan along with related disruptions of port services that lowered import demand.** This was supported by extremely weak domestic demand (Figure 4). However, by early 2022, pressures were building as external resources became increasingly scarce. The central bank shifted to a free float in early March 2022, but quickly switched back to a managed float by late March, to reverse an extremely sharp depreciation. Since then (and prior to the military takeover), the currency averaged about SDG 578.6 in the parallel market and SDG 574 in the formal market.

**Figure 3. Agriculture was driving growth from the supply side**



Source: Central Bureau of Statistics; World Bank Macroeconomic and Fiscal Model (MFMOD) Sudan; World Bank staff estimates.

**Figure 4. Private and government consumption were driving growth from the demand side**



Source: Central Bureau of Statistics; World Bank Macroeconomic and Fiscal Model (MFMOD) Sudan; World Bank staff estimates.

**Higher costs for raw material imports and transport, an increased tax burden amid fiscal tightening, and social tensions contributed to slow economic activity in 2022.** Highly distortionary tax increases, fees, and duties (combined with high input costs), dragged on private sector activity. Industry contracted by 0.7 percent (Figure 4), driven largely by negative growth in the manufacturing sector caused by repressed domestic demand. Growth in the formal gold mining sector more than offset the negative impacts of floods on artisanal mining but was insufficient to cover the contraction of manufacturing. In the service sector, ongoing political instability and disruption of business services, including logistics and telecommunications, continued to stall growth, causing the sector to contract by 3.0 percent. The economic crises, compounded by COVID-19, the military takeover and ongoing civil

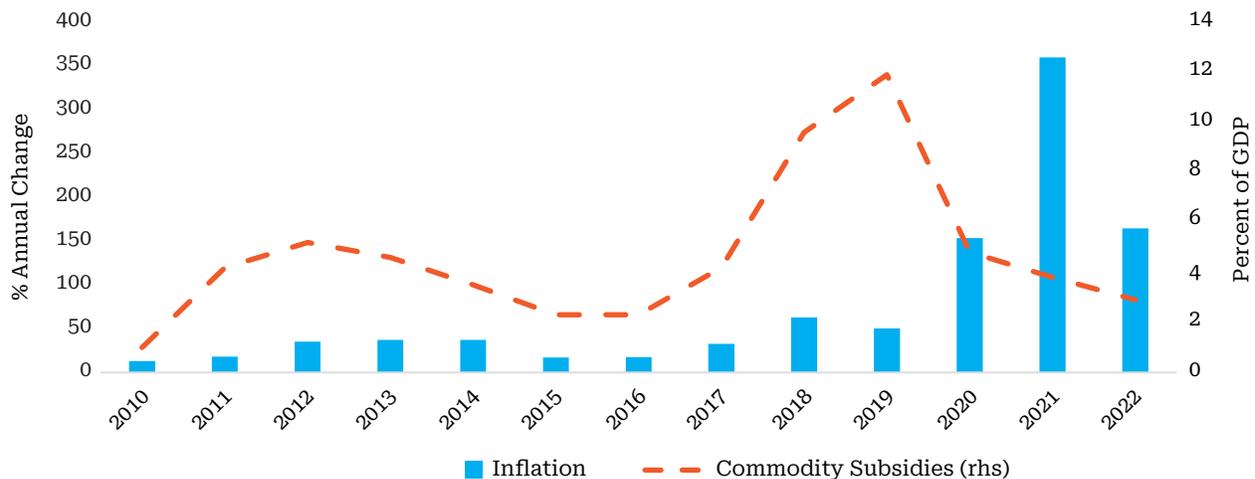
2 Printing money to finance government spending put more money into circulation in the economy at a time when the levels of production and exports were low. The higher domestic demand against low production bid up prices and inflation, which in turn reduced the value of the Sudanese pound, making imports more expensive.

protests, high import prices, food insecurity, and climate shocks all contributed to deepen extreme poverty. Headline poverty is estimated to have increased by 10 percentage points to reach 29.1 percent in 2022 (at US\$2.15/day in 2017 purchasing power parity).

### Although declining, inflation remained high, devastating household purchasing power

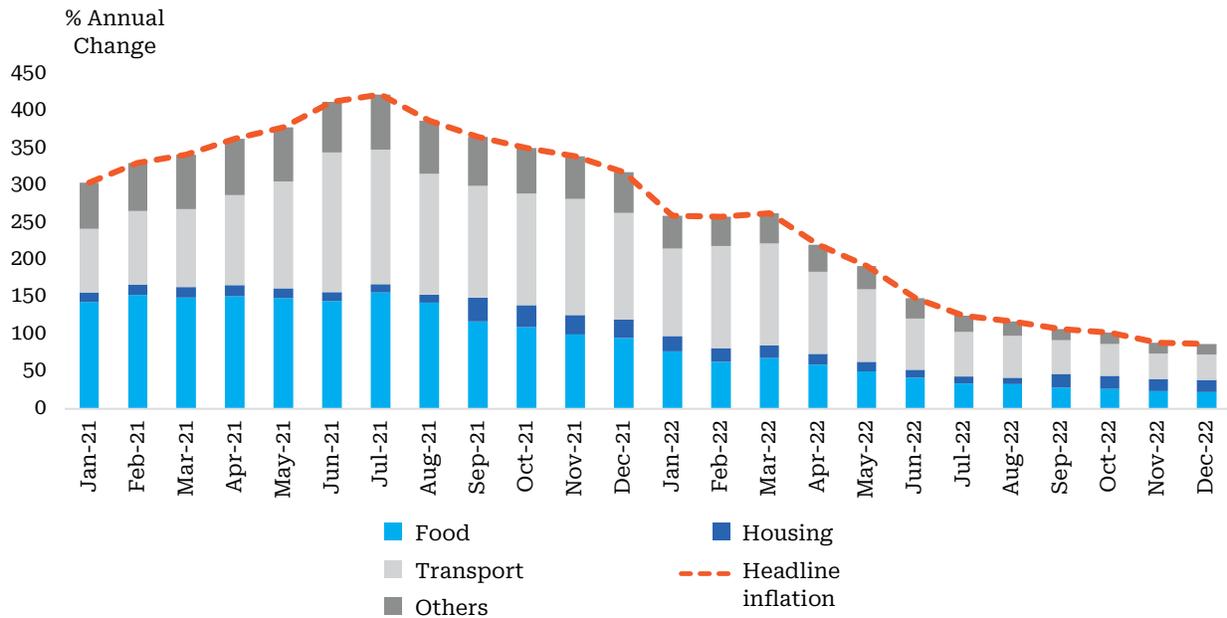
**After peaking at over 400 percent in 2021, inflation began to slow, reaching 87.3 percent in December 2022.** Historically, printing money to finance the deficit (or deficit monetization) has financed persistently large commodity subsidies of close to 5 percent of GDP in 2019, (or 37.3 percent of all government expenditures); and 5.7 percent of GDP in 2021 (or 40.6 percent of all government expenditures). The significant cuts to commodity subsidies (Figures 5 and 6) have thus contributed to the slowdown in money supply growth and an easing of hyperinflation. That said the decline in inflation has been slow as reduced subsidies have also increased retail prices. Specifically, the elimination of fuel subsidies (in a context of rising world prices), coupled with the reduction of subsidies on wheat and medicines and the unification of the official exchange rate, raised the cost of imported commodities including essential goods. As the government reduced its monetization of the fiscal deficit, hyperinflation began to slow from the second half of 2021 onward into 2022 (averaging 164.2 percent annually and falling to 87.3 percent in December) (Figure 7). However, price pressures have persisted, given the ongoing partial monetization of the fiscal deficit, and increased global prices.

**Figure 5. Commodity subsidies have been driving inflation in Sudan**



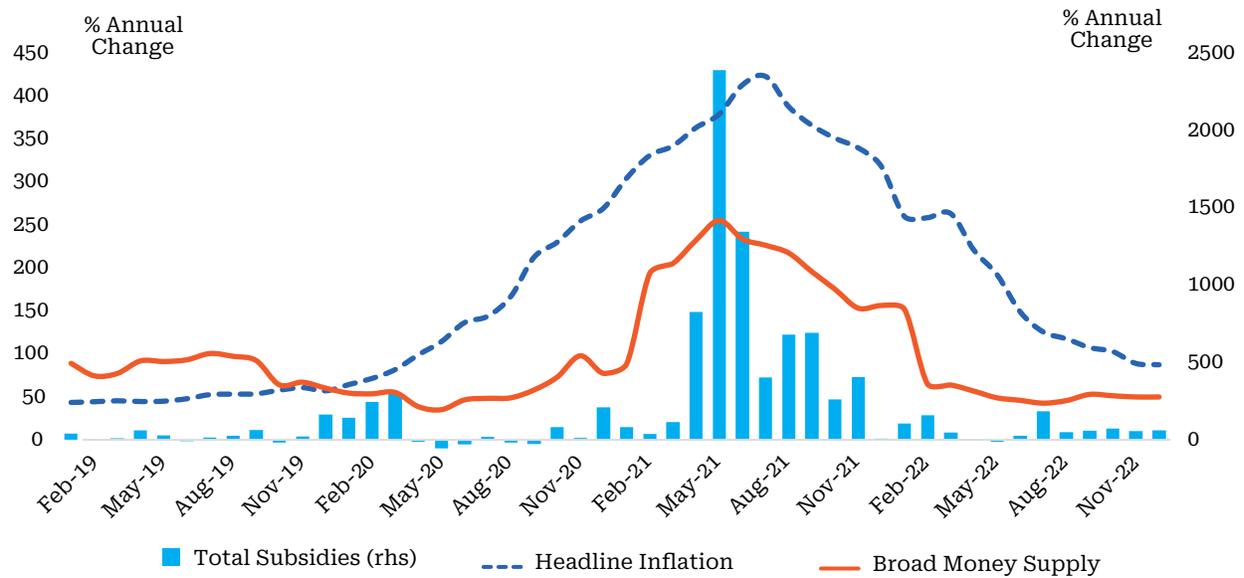
Sources: IMF; Ministry of Finance and Economic Planning.

**Figure 6. Inflation began to slow due to reduced monetization and lower fuel, transport, and housing prices ...**



Source: Central Bank of Sudan.

**Figure 7. ... and a substantial reduction of subsidies in 2022, compared to previous years**

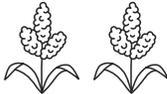


Source: Ministry of Finance and Economic Planning.

**Reducing inflation is critical for a stable economy that supports growth and household welfare.**

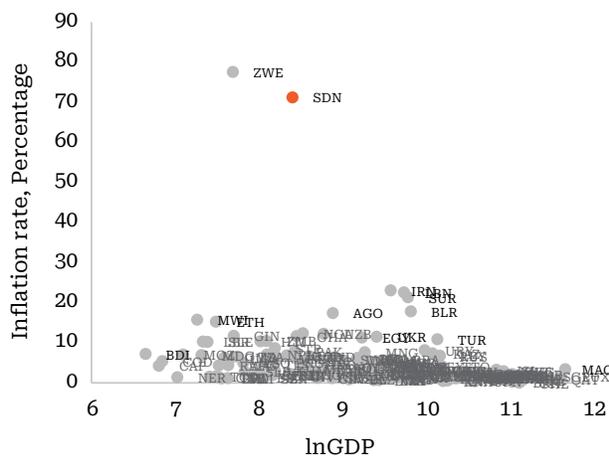
Higher prices have significantly reduced household purchasing power. For example, as of February 2023, with SDG 10,000, households could buy just half the number of essential commodities compared to the previous year (Figure 8). This has contributed to rising poverty. Overall, Sudan’s average inflation during 2010-21 was among the highest globally, second only to Zimbabwe (Figure 9). When compared to its aspirational peers, Sudan’s inflation (given its level of fiscal deficit) in 2022 was also the highest among its peers (Figure 10).

**Figure 8. In 2023, household purchasing power was half that of 2022, in terms of what a household could purchase for SDG 10,000**

	February 2022		February 2023	
Sorghum	61 kg		30 kg	
Wheat Flour	17 kg		13 kg	
Groundnut	1.0 sacks		0.6 sacks	
Diesel	29 litre		16 litre	

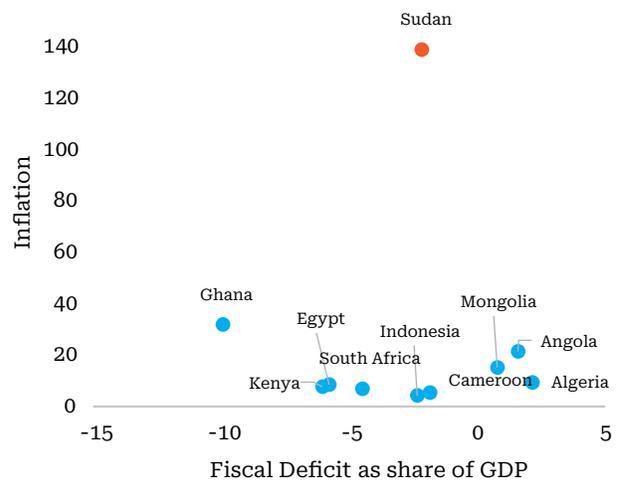
Source: World Food Program.

**Figure 9. Sudan's average inflation (2010–21) is among the highest globally**



Source: World Development Indicators.

**Figure 10. For its fiscal deficit, Sudan's inflation in 2022 was highest among aspirational peers (Percent)**



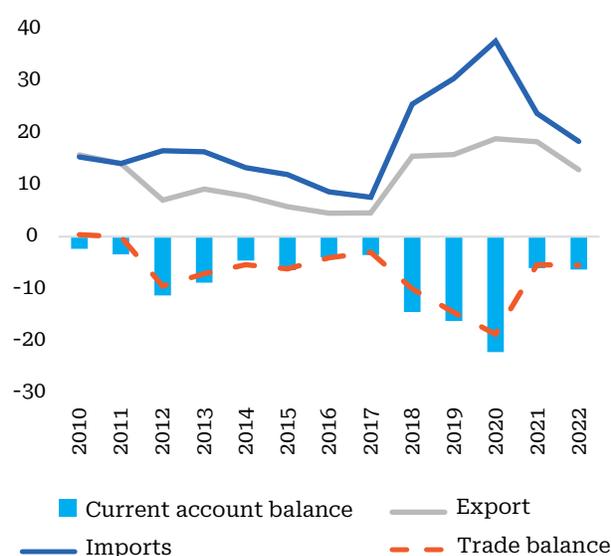
Source: World Economic Outlook April 2023 Database.  
 Note: 2022 inflation for Cameroon and Ghana is estimated; the 2022 fiscal deficit for Algeria, Angola, Cameroon, Ghana, and Sudan is estimated.

## Foreign reserves financed a relatively stable external deficit, backed by strong exports, remittance inflows, and repressed demand

**The relatively stable external or current account deficit was financed by the withdrawal of foreign reserves.** The current account deficit widened by 0.3 percentage points of GDP between 2021 and 2022.

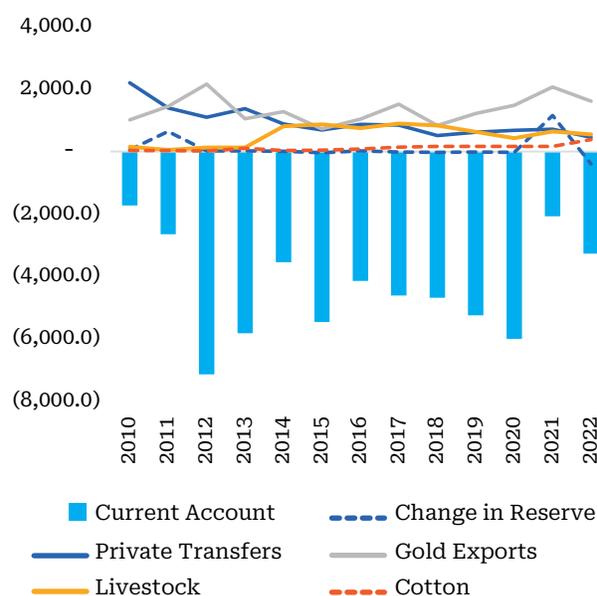
Higher global fuel and food prices, coupled with domestic harvest losses due to floods, contributed to a higher import bill. Exporters were also impacted by rising costs of imported inputs and higher taxes and levies (imposed by the government to cover the lack of external grants). However, the impact on the goods trade deficit (which widened by only 0.1 percent of GDP to 5.5 percent in 2022) was relatively muted (Figure 11), reflecting (i) a significant compression in demand for other imports due to the tight fiscal policy, weak economic activity, and declining real household incomes; (ii) higher total inflows from crude exports and transit fees from South Sudan that partially offset higher payments for petroleum and fuel imports; and (iii) increased cotton exports.<sup>3</sup> As a result, the aggregate import bill rose by 16.9 percent in 2022 (to US\$9.5 billion), while export receipts grew by 6.1 percent to reach US\$6.6 billion. To compensate for the loss of external grants, the current account deficit was financed by a drawdown in reserves, which fell to US\$1.2 billion from US\$1.6 billion in 2021 (Figure 12).

**Figure 11. The trade deficit was muted in 2022 due to compressed domestic demand (Percent of GDP)**



Source: Central Bank of Sudan.

**Figure 12. Gold exports, private transfers (remittances), and reserves financed the current account deficit (Millions of US\$)**



Source: Central Bank of Sudan.

### Private sector credit declined, while limited external resources contributed to tight monetary policy, limiting large swings in the exchange rate

**Limited financial intermediation hindered private-sector-led growth.** Financial intermediation was already very low prior to the recent conflict, due to political uncertainty, continuing financial shocks (currency depreciation, cash crisis, inflation), and the population's low trust of banks. As a result, formal savings in banks were low, with the population using banks mainly for current operations. This constrained the ability of banks to accumulate resources for lending operations. According to Central Bank of Sudan (CBoS) data, domestic credit to the private sector declined from 9.5 percent of GDP in

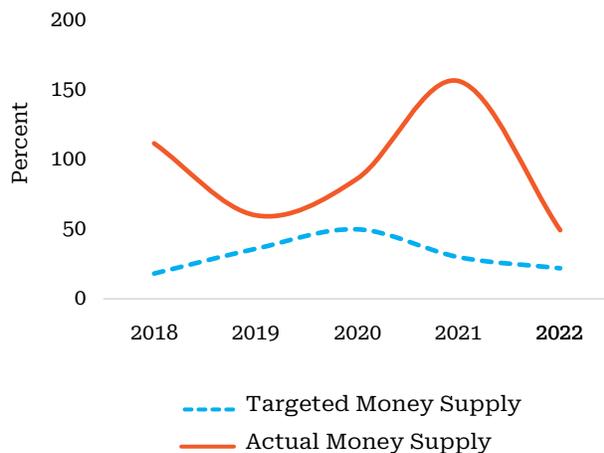
<sup>3</sup> Between 2021 and 2022, total goods exports grew by 1.8 percent, with the most positive contributions to growth from cotton (5.1 percentage points [pp]), melon seed (1.1 pp), and gum Arabic (0.7 pp). Gold (-1.0 pp) and livestock (-2.1 pp) contributed negatively. As a result, the share of cotton in total exports doubled from 3.9 percent of total exports in 2021 to 8.8 percent in 2022. In 2022, gold accounted for 46.4 percent of total exports and livestock for 12.6 percent.

2019 to 8.8 percent in 2020 and was estimated to be 6.2 percent in 2021. This highlighted the need to restructure banks, to effectively carry out their financial intermediation function and contribute to economic development.

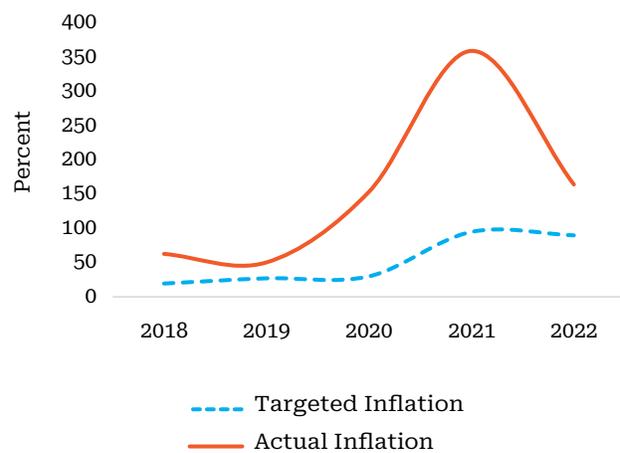
**Several banks were operating at a loss, and most banks (at least 21 of 38) had a solvency ratio below 10 percent in 2022.** A recent review conducted by the central bank, prior to the April 2023 conflict, showed a continued deterioration of asset quality in 2021 and 2022. Those banks that were not part of the asset quality review also exhibited significant levels of stress, with many problem banks in need of some resolution measures, and most troubled banks potentially needing liquidation measures. Despite this, nonperforming loans (NPLs) remained around 3.4 percent, likely reflecting underreporting. Capital adequacy ratios had been declining since December 2019, falling to 7.1 percent by end-2021<sup>4</sup>, significantly below the minimum required ratio of 12 percent.

**The contraction of domestic demand was also evident in the poor performance of Sudan’s equity market, compared to regional stock markets.** As of December 2022, there were 66 companies and 42 brokerage companies, 23 investment funds, and 32 government certificates listed on the Khartoum Stock Exchange. Stock market capitalization was roughly 3.3 percent in 2022. This was extremely low compared to 162 percent in the Middle East and North Africa (excluding high-income countries) and 79.6 percent in lower middle-income countries (as of 2020). The amount of fresh capital raised to GDP declined from 2.3 percent of GDP in 2018 to an exceptionally low 0.02 percent of GDP in 2021, though it improved to 1.2 percent in 2022. Listed companies are thinly traded; the total value traded was also incredibly low and declined from 0.75 percent of GDP in 2019, to 0.01 percent in 2021, and to 0.003 percent in 2022, compared to 41 percent in lower middle-income countries in 2020. Trading was concentrated in high-yielding government sukuk<sup>5</sup> (over 30 percent of transactions). Sudan’s Financial Market Authority had taken steps in 2022 to develop the capital market. A new Capital Market Bill had been drafted and submitted for approval in 2021 (but was not yet approved as of April 2023); and technical committees had been formed to establish a commodity exchange for agricultural products and a gold exchange. In addition, a circular was issued in July 2022 requiring all listed companies to revalue their assets when issuing new shares to raise capital.

**Figure 13. Actual money supply growth (percent) exceeded the target ...**



**Figure 14. ... and actual inflation consistently exceeded the target**



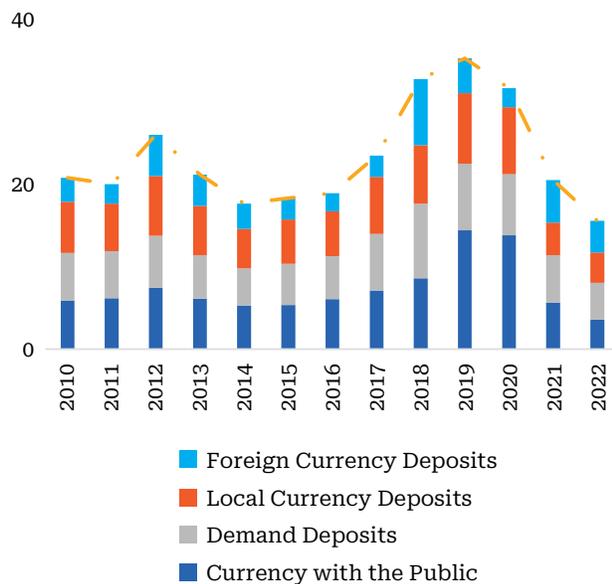
Source: Central Bank of Sudan.

4 This was the last date for which data from the CBoS were available.

5 A sukuk is a sharia-compliant bond-like instrument used in Islamic finance.

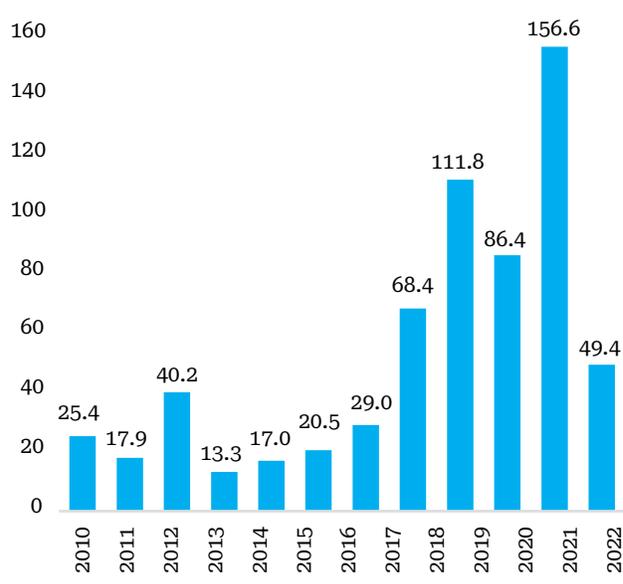
**The Central Bank of Sudan (CBoS) managed monetary policy by issuing Islamic financial certificates, setting reserve requirements, and actively managing the exchange rate.** Monetary policy implementation was further constrained by a liquidity crunch in the banking sector, due to the suspension of international financial support and contracting domestic demand. The CBoS had a specific intermediate goal of achieving a targeted lower annual inflation rate, which required a lower targeted money supply growth alongside an operational goal for reserve money. The CBoS money supply target was mainly determined by the annual inflation rate target. Historically, the CBoS was not meeting its policy targets due to the need to finance the deficit, but also due to limited instruments for conducting monetary policy. For example, the targeted inflation rate and targeted money growth were consistently below their actual values (Figures 13 and 14). In 2022, although CBS failed to reach its money supply growth target of 22 percent, the government kept to a contractionary monetary policy stance, curbing money supply growth to 49.4 percent (Figures 15 and 16), to achieve an average annual inflation rate of 164.2 percent.

**Figure 15. Money supply declined steadily since 2020 (Percent of GDP)**



Source: Central Bank of Sudan.

**Figure 16. Broad money (M2) growth peaked in 2021 (Percent)**



Source: Central Bank of Sudan.

**The Sudanese pound (SDG) was initially stable through 2021 despite the pause in external inflows and heightened political instability.** Stability of the SDG was helped by the slower pace of printing money to finance government spending, the closure of Port Sudan, and related disruptions of port services that lowered import demand. The currency stabilized at around SDG 450 to the U.S. dollar in the second half of 2021, even after the balance-of-payments shock of Q4 2021, following the military takeover. Over the course of 2021, the SDG appreciated by 55 percent in real terms against the U.S. dollar buoyed by disbursements from development partners at the time.

**Strong depreciation pressures finally emerged in early 2022.** In early March 2022, the Sudanese authorities announced that they were abandoning their management of the official exchange rate in favor of a free float without intervention. However, with the currency depreciating from SDG 600 to SDG 800 to the U.S. dollar in one week, the authorities reversed course on March 27 and announced that they would again use foreign reserves to stabilize the foreign exchange market. Following this

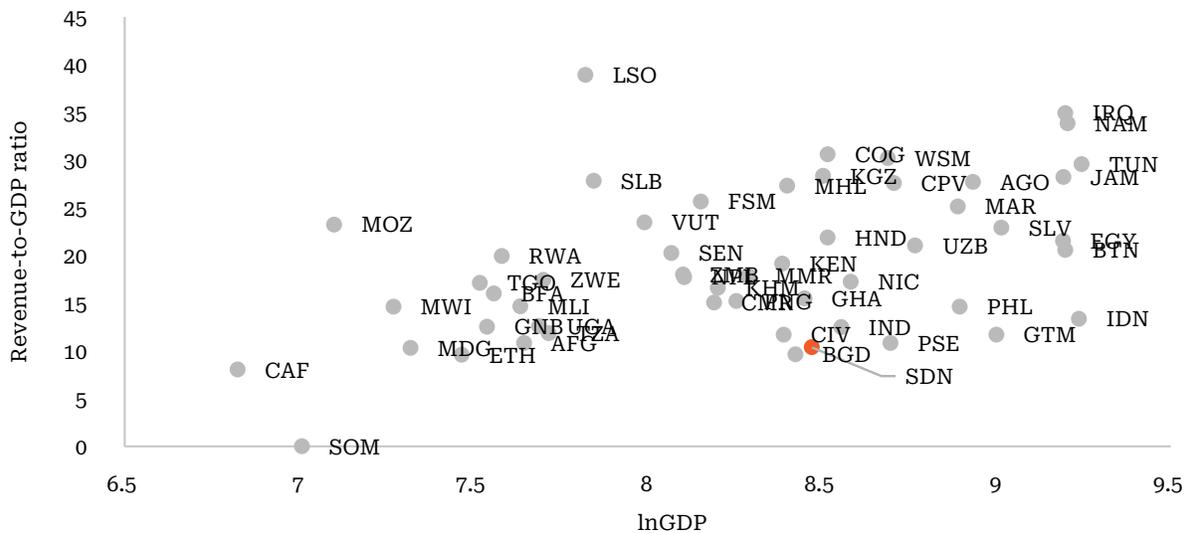
(and likely due to possible interventions in the foreign exchange market), the SDG appreciated back to SDG 680 on the parallel market and SDG 585 on the formal market. Between April 2022 and March 2023, the SDG had been relatively stable, with the premium between the parallel and official rate averaging 0.7 percent. Over the past year, the currency averaged about SDG 578.6 in the parallel market and SDG 574 in the formal market. The stability of the exchange rate reflects several factors, including a lower trade deficit, but also a tighter fiscal and monetary policy stance as evidenced by efforts to reduce the fiscal deficit and its monetization. Growth in the money supply fell below 49.4 percent in 2022 from 157 percent 2021. Exchange rate stability also benefited from drawdowns on foreign exchange reserves, with reserves declining by US\$0.4 billion in 2022 to reach an estimated US\$1.2 billion (1.4 months of import cover) by the end of the year.

### The fiscal deficit widened due to a higher wage bill and transfers (to mitigate inflation)

#### Sudan entered an era of persistent fiscal deficits, following the secession of South Sudan in 2011.

The fiscal deficit averaged 5.4 percent of GDP during 2011–21, higher than the average of 3.7 percent of GDP for Sub-Saharan Africa<sup>6</sup> over the same period, largely driven by Sudan’s extremely low revenue mobilization capacity relative to its level of income. Over the past decade, Sudan’s revenue as a share of GDP has been among the lowest in the world (Figure 17), due to large tax loopholes and weak administration.

**Figure 17. Revenue-to-GDP ratio average, 2010–21: Sudan and peers**

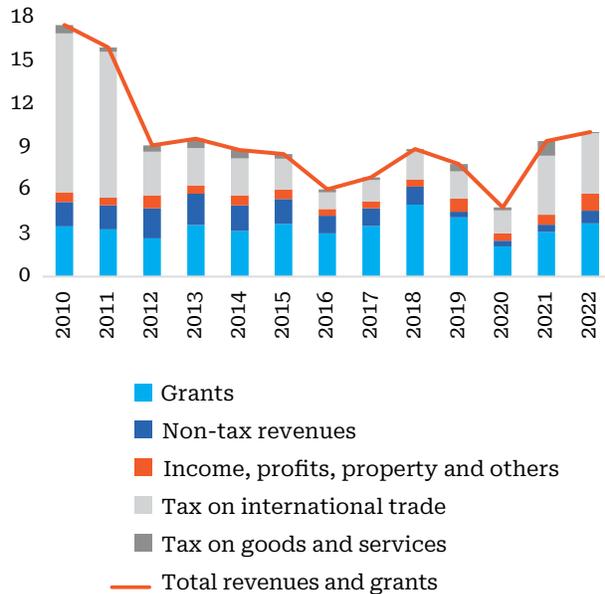


**Low revenues and a lack of external grants caused the Government to further scale back spending on fuel subsidies, and all but eliminate subsidies on wheat and medicines in early 2022.** The Government took steps to further reduce subsidies, most notably through the liberalization of diesel and gasoline prices in mid-2022, and increased the electricity tariff. In addition to efforts to curb subsidies in the face of growing fiscal pressures, the government also adopted measures to increase revenue (Figure 18). Measures adopted included substantial hikes in taxes, transit tariffs, and customs duties.

6 World Economic Outlook April 2023 Database.

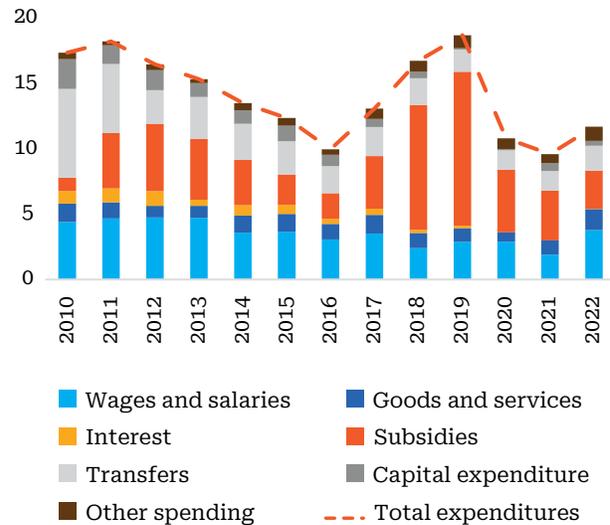
However, these measures further undermined already weak private sector activity and contributed to social unrest.

**Figure 18. Total revenues (percent of GDP), 2014–22**



Source: Ministry of Finance and Economic Planning.

**Figure 19. Composition of government spending (Percent of GDP), 2014–22**

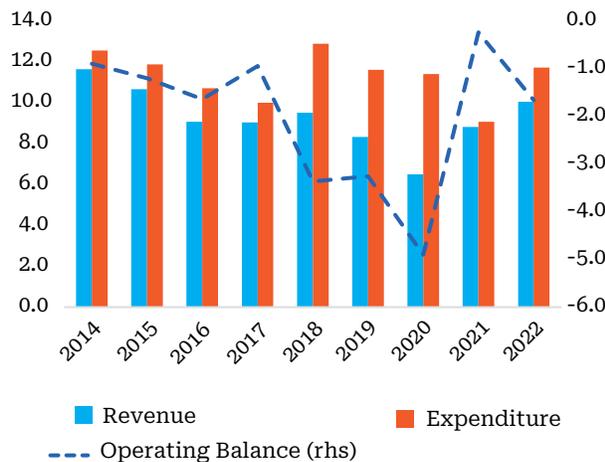


Source: Ministry of Finance and Economic Planning.

**The fiscal deficit widened to an estimated 1.7 percent of GDP (or SD 479 billion in 2022 compared to SD 40 billion in 2021), despite efforts to mobilize fiscal savings through reducing subsidies and raising revenues.** Revenues and grants increased by 104.3 percent in 2022. Specifically, recent tax hikes increased tax revenues by 1.5 percentage points, to 5.8 percent of GDP in 2022, while nontax revenues increased by 0.1 percentage points to 4.2 percent of GDP. Nontax revenues were driven by higher global oil prices, which also impacted oil transit fees from South Sudan. Oil sales and transit fees amounted to 2.8 percent and 1 percent of GDP, respectively. Higher revenues more than covered the 0.9 percentage points of GDP reduction in grants.

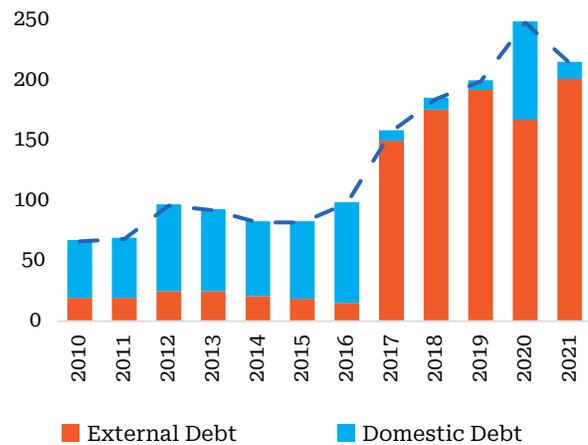
**On the expenditure side, commodity subsidies declined in 2022 (from 38.9 percent of total spending in 2021 to 24.8 percent in 2022), but electricity subsidies still accounted for 70.6 percent of total subsidies.** Overall, spending rose by 131 percent, to 11.7 percent of GDP, driven by an increase in the wage bill, which more than tripled, and social transfers, which increased more than fivefold, with the aim of protecting public sector workers from high inflation (Figure 19). However, the higher wages reflected only a partial implementation of the planned new salary structure, and this led to labor strikes. Social transfers increased by an estimated 0.4 percentage points, to an estimated 1.9 percent of GDP in 2022. Until the April 2023 conflict, the country faced a dilemma of either raising prices further and causing more unrest or increasing subsidies and returning to monetization of a larger fiscal deficit (Figure 20 and 21). Overall, public debt declined to roughly 183.6 percent of GDP in 2022 (from 215.6 percent in 2021). It is unclear whether the Government took on new bilateral debt. However, as of Q1 2023, the Government was up to date on its debt service to multilateral institutions.

**Figure 20. Budget balance, 2014–22 (Percent of GDP)**



Source: Ministry of Finance and Economic Planning.

**Figure 21. General government debt, 2010–21 (Percent of GDP)**



Source: Ministry of Finance and Economic Planning.

## Deepening fragility could set the country back several decades

**The ongoing conflict has broadly destroyed the economic base.** Specifically, as of end-June 2023, there was already (i) destruction of the industrial base; (ii) physical damage to some banks and the central bank, which has impeded their functioning; and (iii) a halt of services including wholesale/retail sales, restaurants, and financial and ICT services, in addition to education and health services (as several facilities have been destroyed). For the upcoming 2022/23 growing season, land preparation and planting have been constrained by shortages of seeds, fertilizer, and labor. This has been compounded by high prices for essential agricultural inputs and insufficient financial support for farmers from the Agricultural Bank of Sudan (ABS), as well as difficulties importing agricultural inputs due to a lack of hard currency. The significant disruption of supply (in domestic markets) has adversely affected agricultural households, reducing the marketable food surplus.

**Overall, the economy is expected to contract by 12 percent in 2023.** Economic contraction in 2023 will largely be driven by lower consumption, which accounts for roughly 94 percent of GDP. Net exports, investment, and revenues were negligible prior to the outbreak of fighting in April 2023, and are since expected to have collapsed further. The outbreak of fighting destroyed a large part of income sources, including official flows of remittances. Informal remittance flows are expected to be limited by the ongoing fighting and the physical damage to infrastructure, which interrupted electronic banking.<sup>7</sup> In addition, mass displacements of populations have contributed to disrupted income sources and increased food insecurity. As of end-July, OCHA estimates more than 3.5 million people have been displaced, including over 2.7 million inside the country and nearly 823,000 that fled to neighboring countries. As firms and households adjust to the crisis, economic contraction is expected to slow significantly to -0.6 percent in 2024, with the possible beginnings of a recovery and growth in 2025 of around 0.2 percent.

7 UNDP 2020.

**The war is expected to increase the budget deficit and depreciate the SDG, causing a return to triple-digit inflation.** Policies to contain spending and limit monetization helped put inflation on a downward trend. However, supply shortages, increased spending on the conflict (to the detriment of public services and human capital), and a resumption of monetization are expected to raise inflation.

**Another year of significant economic contraction and extremely high inflation will be hugely damaging.** In 2023, the limited food supply was mainly due to the disruption of distribution channels that undermined the ability to bring agricultural produce to market. Together, these shocks adversely affected households' ability to pay for food and other basic items, particularly due to the increased difficulty of accessing banks and mobile money accounts. Prices of food, fuel, and other basic goods have skyrocketed, making critical goods unaffordable for an increasing number of households. High fuel costs and supply disruptions are expected to raise transportation costs and negatively affect the incoming agricultural season, which will further add to food insecurity. The corresponding reductions in income and employment have compounded the welfare challenges faced by the poorest and most vulnerable, leading to further internal displacement, heightened food security risks, and deeper destitution for those who are already poor. Food insecurity is expected to increase. The World Food Program estimated that over 16.2 million people, or 34 percent of the population, experienced food insecurity in Sudan in Q1 2023. Within the next one to four months, the share of the population that will be food insecure is estimated to reach 39 percent, or 19.1 million people.

**Social services have essentially collapsed.** The Sudan Doctors Trade Union reported that as of May 2023, 60 out of 86 hospitals in war-torn areas – 70 percent – were no longer functional, cutting off critical care for people caught in the conflict.<sup>8</sup> According to the World Health Organization (WHO),<sup>9</sup> as of end-July, estimates were that more than 80 percent of hospitals in Sudan were closed. The WHO also reports that health staff have not been paid for almost three months, and most have relocated to safer areas. There are serious shortages of medicines and supplies. Outbreaks of malaria, measles, dengue, and acute watery diarrhea, which were under control before the conflict, are increasing due to the disruption of basic public health services. As the rainy season begins in 2023, outbreaks are likely to claim more lives if urgent action is not taken to control their spread.<sup>10</sup> These shocks are expected to significantly erode human capital.

**The expected costs highlighted above point to the urgency of stopping the conflict and focusing on reconstruction and revitalizing the economy.** This will require fiscal support to households, incentives to businesses, and increased public investment to address the damage to infrastructure. It will also require public sector reforms to strengthen transparency and trust, improve service delivery, and bring back the private sector.

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8 USAID 2023.

9 As cited by OCHA (July 2023); <https://reports.unocha.org/en/country/sudan? gl=1%2a3y7ny0%2a ga%2aMTU-wNjU3MTY1OS4xNjkwODk5OTgx%2a ga E60ZNX2F68%2aMTY5MDg5OTk4MS4xLjEuMTY5MDkwMDY2OS4xO-C4wLjA>.

10 As cited by OCHA (July 2023); <https://reports.unocha.org/en/country/sudan? gl=1%2a3y7ny0%2a ga%2aMTU-wNjU3MTY1OS4xNjkwODk5OTgx%2a ga E60ZNX2F68%2aMTY5MDg5OTk4MS4xLjEuMTY5MDkwMDY2OS4xO-C4wLjA>.



**PART II:  
Six Messages about Deepening  
Household Fragility and Poverty  
in Sudan**

Shocks to the economy adversely impacted households through four key channels linked to labor and nonlabor income, consumption, and service disruption. Work stoppages reduced income more for women (especially in rural areas) than men. High food prices increased food insecurity; remittances declined, particularly for poorer households; and the share of households that could afford rent declined as did access to social services. Households adopted different strategies to cope, such as reducing consumption or switching income sources to make ends meet. Limited fiscal space constrained social protection and the ability to mitigate the impact of shocks on households, highlighting the urgency to end the conflict, and invest in businesses and households to support employment.

### **Message 1: Households were severely hit by shocks from COVID-19, the 2021 military takeover, drought, floods, and erratic rainfall**

**Sudan experienced significant social and economic impacts due to the COVID-19 pandemic.** The pandemic resulted in large demands on the health system. After the first case was reported in mid-March 2020, Sudanese authorities declared a state of emergency and implemented measures such as school closures, travel bans, lockdowns, and quarantines for travelers. Lockdowns remained in place until July 7, 2020, and then were gradually eased back from that date. The pandemic resulted in 63,922 confirmed cases, with the highest daily rates in January 2021, January 2022, and February 2022. Lockdowns combined with the shock to the health system disrupted production, particularly in the service sectors in urban areas. The shock also adversely impacted trade and internal distribution systems.

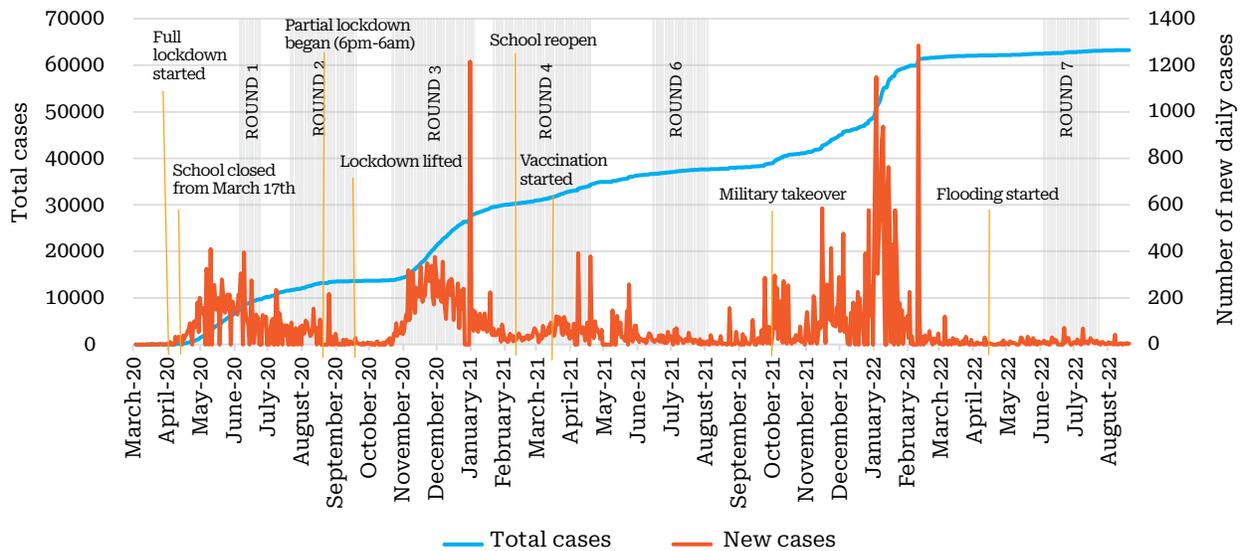
**As the economy was beginning to recover, the October 2021 military takeover resulted in a significant reduction of foreign grants and investments.** The adverse effects on investor sentiment, coupled with lower inflows of resources, put depreciation pressures on the exchange rate and caused high inflation. At the same time, increased electricity and fuel shortages contributed to inflationary pressures, causing inflation to rise from 155.13 percent in June 2020 to peak at 423 percent in July 2021. This set back the pace of economic recovery.

**Shocks from the pandemic and military takeover were further exacerbated by climate shocks, such as droughts, floods, and erratic rainfall, which exacerbated an already dire situation for Sudanese households.** Climate shocks led to crop losses, which further increased food shortages and prices, ultimately affecting household welfare. Lack of agricultural inputs constrained food production and adversely impacted the livelihoods of agricultural households, thereby increasing food insecurity and reducing access to basic services.

**The World Bank collaborated with Sudan's Central Bureau of Statistics to implement a High-Frequency Phone Survey of Households (HFS) during June 2020–August 2022, to assess the impact of COVID-19 on households and businesses in Sudan.** The survey used a list of phone numbers collected from previous surveys across the country. The questions covered changes in behavior due to COVID-19, access to basic services and staple foods, access to educational activities during school closures, employment dynamics, household income and livelihood, income loss, coping strategies, and assistance received. The survey was conducted between June 2020 and August 2022 and included

seven rounds (Figure 22). Respondents were mostly males aged 25 to 64, of which 70 percent completed secondary and higher education and a majority of whom lived in urban areas. The sample was then corrected using weights to represent the distribution of households across states and mode of living.

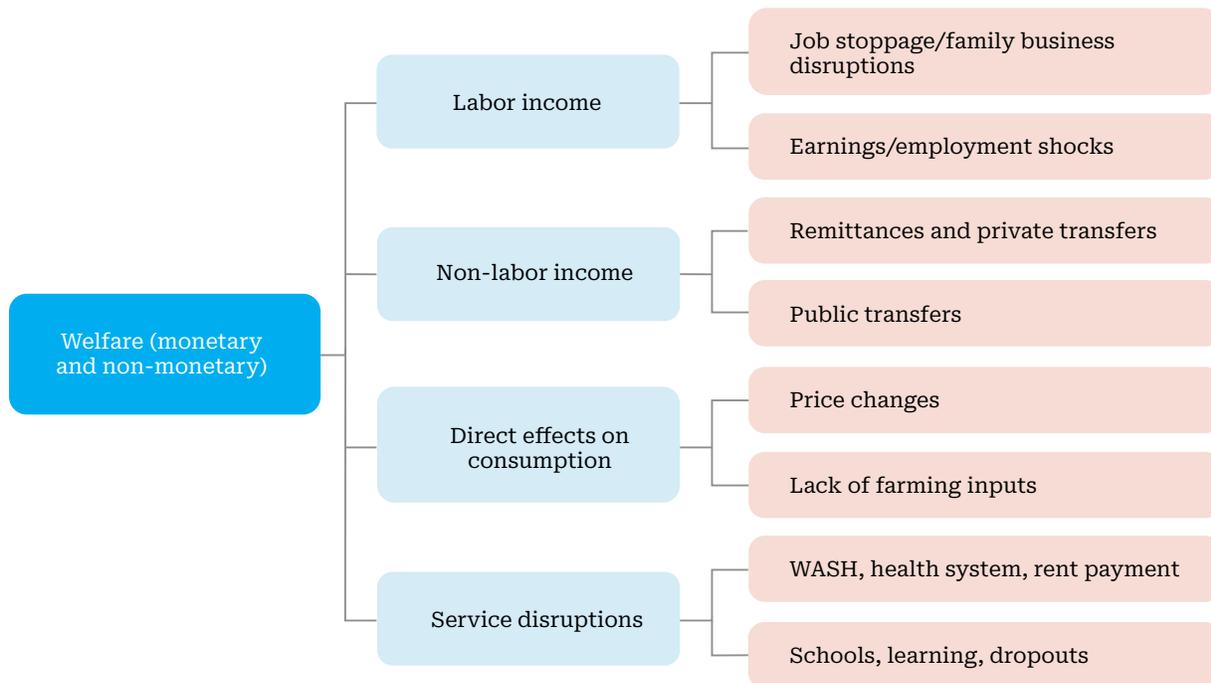
**Figure 22. The High-Frequency Phone Survey of Households: Timeline and COVID-19 cases in Sudan**



Source: Adapted from “Our Work in Data”; <https://ourworldindata.org/coronavirus/country/sudan?country=~SDN>, March 17, 2023.

**Figure 23 shows shocks to the economy-impacted households and businesses through four channels.** First, labor income was impacted through work stoppages (due to illness or economic shutdowns) and disruption of job opportunities. This impacted household earnings directly and indirectly as businesses reduced operations. Second, nonlabor income was also impacted through reducing international and domestic remittances, as well as changes to public transfers, which have significantly impacted household finances. Third, households restricted consumption to accommodate lower earnings and higher prices. Shortages and interruptions in service delivery (arising from both shutdowns due to the pandemic and to continued protests and demonstrations) have contributed to higher prices and reduced consumption. This was further exacerbated by a lack of access to agricultural inputs, which have also led to reduced supply of food items and food insecurity.

**Figure 23. Four channels of COVID-19 economic impacts**



Source: This diagram is based on Figure 1 of World Bank Group (2020).

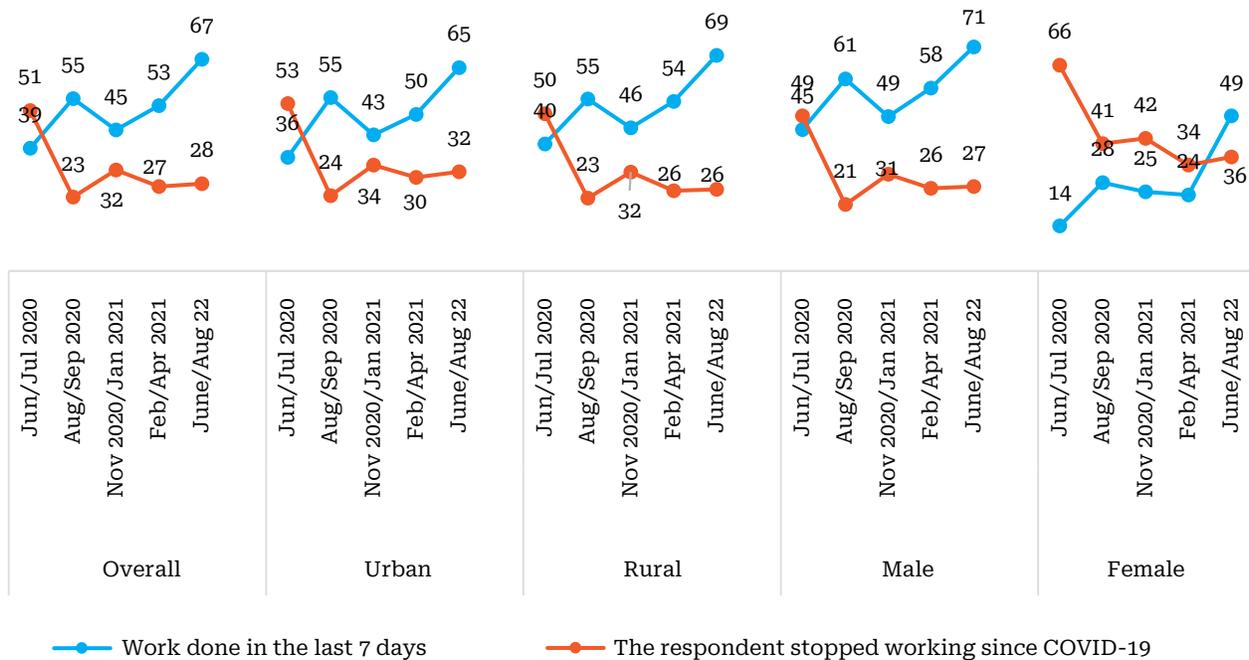
Note: WASH = water, sanitation, health care waste management, hygiene and environmental cleaning infrastructure and services.

## Message 2: COVID-19 and the military takeover reduced employment and labor income, particularly for women and rural residents

**COVID-19 led to significant work stoppages during June–July 2020.** Of households surveyed, 51 percent of those previously employed reported work stoppages after the onset of the pandemic. This figure declined to 28 percent during June–August 2022 (Figure 24). However, women were more impacted by work stoppages than men, with 36 percent of women who lost their jobs still not working during June–August 2022, compared to 27 percent of men. COVID-19 illnesses and associated restrictions were the main reasons for work stoppages in 2020. As shown in Figure 25, 67 percent of respondents attributed their job loss directly to the outbreak restriction measures. Almost all of those who stopped work due to other reasons during June–July 2020 reported a curfew (17 percent) as the cause. During August–September 2020, about 75 percent indicated the same restriction reasons. Overall, during the same period (August–September 2020), women were more likely to lose their jobs due to layoffs or lack of business, compared to men (20 percent of women compared to 1 percent of men).

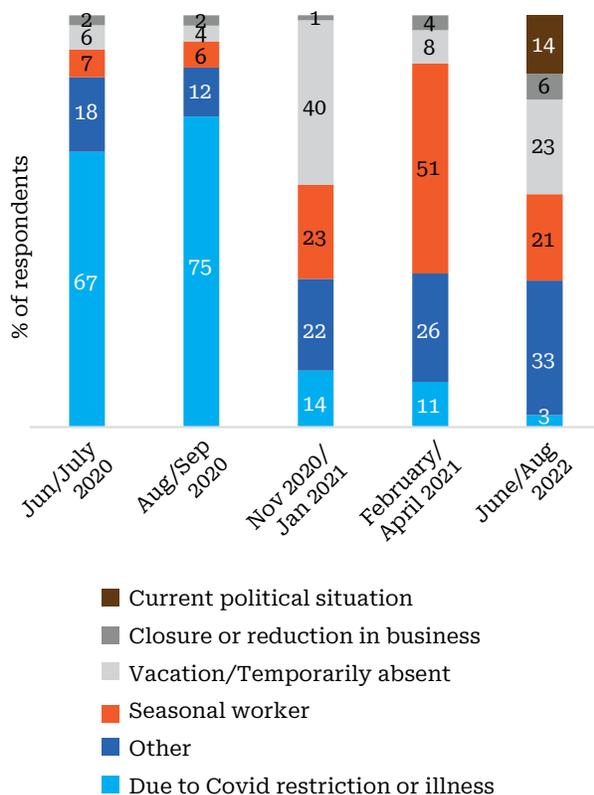
**Business closures, reduced demand, and lack of production inputs resulted in a loss of revenue during the pandemic.** The most common reasons for business losses were lack of customers (reported by 60 percent of those surveyed during November 2020–January 2021 and 80 percent during February–April 2021), and inaccessibility of inputs (37 percent during November 2020–January 2021). These challenges were particularly acute for poorer households, which faced greater difficulties in accessing inputs. Conversely, lack of customers was the primary reason for loss of business income for richer households, particularly during November 2020–January 2021.

**Figure 24. Employment status, in percent**



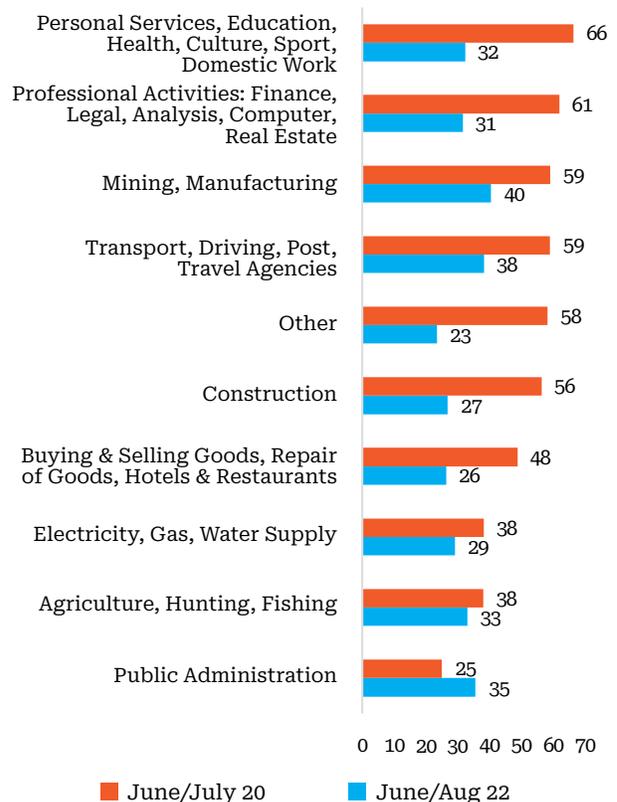
Source: Sudan High-Frequency Survey Round 1 to Round 7.

**Figure 25. Reasons for stopping work since COVID-19**



Source: Sudan High Frequency Survey Round 1 to Round 7.

**Figure 26. Previous main activity of those who lost their job since COVID-19, in percent**



Source: Sudan High Frequency Survey Round 1 to Round 7.

**While the COVID-19 pandemic had the greatest adverse impact on service sector jobs, this changed after the October 2021 military takeover.** In 2020, 66 percent of individuals employed in the service sector (including education, health, culture, sport, and domestic work) reported work stoppages, followed by approximately 60 percent of employees in professional activities (finance, legal, computer, and real estate), mining and manufacturing, and transport services. In contrast, for electricity, gas, water supply, and agriculture, 40 percent reported work stoppages; and for public administration, 25 percent of employees surveyed reported stoppages. These trends changed in 2022 (after the October 2021 military takeover), when the manufacturing and mining sectors combined experienced higher work stoppages, at 40 percent of employees reporting work stoppages. This was followed by the transport sector (38 percent) and public administration (35 percent); construction (27 percent) and the buying and selling sectors (26 percent) had the lowest rates (Figure 26).

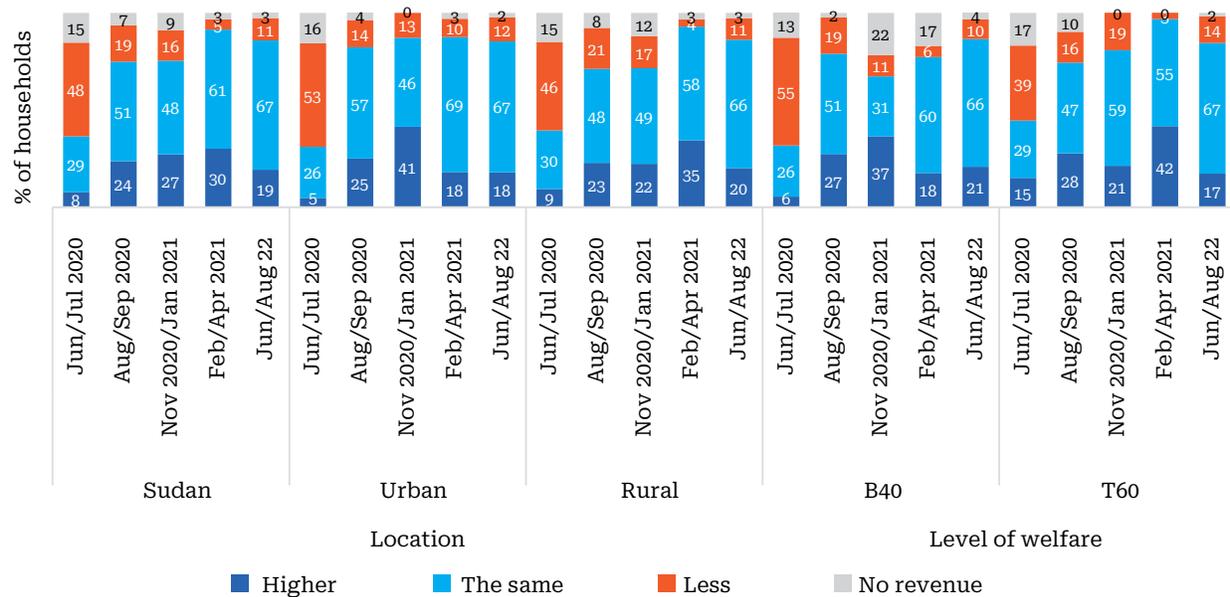
**Two years after the pandemic, respondents reported the political situation arising from the military takeover was among the top three reasons for work stoppage (Figure 25).** In 2022, the top three reasons respondents stopped working were absenteeism (23 percent of workers), seasonal work (21 percent), and the current political situation (14 percent). Women reported layoffs (59 percent) as the main reason for stopping work, followed by the current political situation (14 percent).

**An increasing number of businesses reported lower revenue seven months after the military takeover.** Overall, 25 percent of family businesses reported the country's political situation as the primary reason for having no change or lower revenue during June–August 2022. This was regardless of whether they were located in rural or urban areas, were headed by males or females, or belonged to the top quintiles. The second-most-common reason for revenue loss was difficulty securing business loans (20 percent of businesses reported this). While some businesses reported earning higher revenue a year after the pandemic,<sup>11</sup> there was an increase in the number of businesses reporting lower revenue during June–August 2022 (11 percent), compared to February–April 2021 (5 percent). This indicates a doubling of the percent of businesses earning lower revenues between the two periods. There were also indications of slow recovery from the pandemic, given that two-thirds of businesses earned the same revenue during June–August 2022 as during February–April 2021 (Figure 27).

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11 From 8 percent of businesses during June–July 2020 to 30 percent during February–April 2021.

**Figure 27. Changes in revenue of households operating a nonfarm family business (Percent)**



Source: Sudan High-Frequency Phone Survey Round 1 to Round 7.  
 Note: B40 = bottom 40 percent; T60 = top 60 percent.

**Rural businesses were affected more severely than those in urban areas.** Specifically, there was a 7-percentage-point increase in the number of rural businesses that reported lower revenue compared to a decrease of 2 percentage points for urban businesses. Similarly, businesses owned by the top wealth quintile have been more negatively affected than those owned by the lower quintiles, with only 17 percent of the top 60 quintiles of family businesses reporting higher revenue – a 25-percentage-point decrease from February to April 2021 (Figure 27).

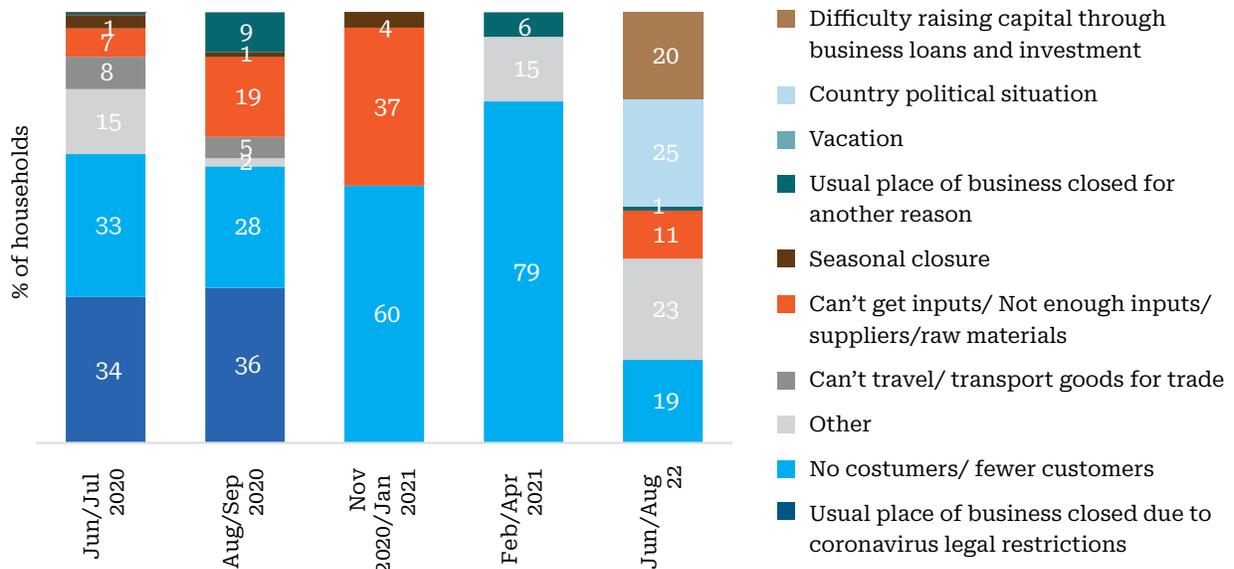
**Following the military takeover, the country’s political situation emerged as the primary reason for family businesses reporting no or reduced revenue in June/August 2022.** Overall, 25 percent of family businesses reported no or reduced revenues, regardless of whether they were located in rural or urban areas, were headed by males or females, or belonged to the top quintiles. The second most common reason for lack of revenue was difficulty securing business loans, which was reported by 20 percent of family businesses. And (although not statistically significant), difficulty in securing loans was the second most reported reason affecting revenues (next to the political situation, see Figure 28).

**The COVID-19 pandemic and the military takeover have had distinct and significant impacts on the revenue of rural households and their ability to sell agricultural products.** For the households that had products to sell, their ability to do so substantially decreased in 2022, due to reduced demand and disruption of distribution channels. While nearly all farming households (95 percent) were able to sell their products during February–April 2021, this proportion dropped to 61 percent of farming businesses able to sell their products when needed (Figure 29). Most households with agricultural stocks during June–July 2020, February–April 2021, and June–August 2022 sold their products at higher prices than the year before, compared to 25 percent that had stocks during August 2020–January 2021.

**Earnings growth slowed for all workers in 2022 compared to the previous year, particularly for the poor.** During June–July 2020, the percentage of households experiencing an increase in income from various sources rose from 23 percent to 44 percent during February–April 2021. However, it decreased by

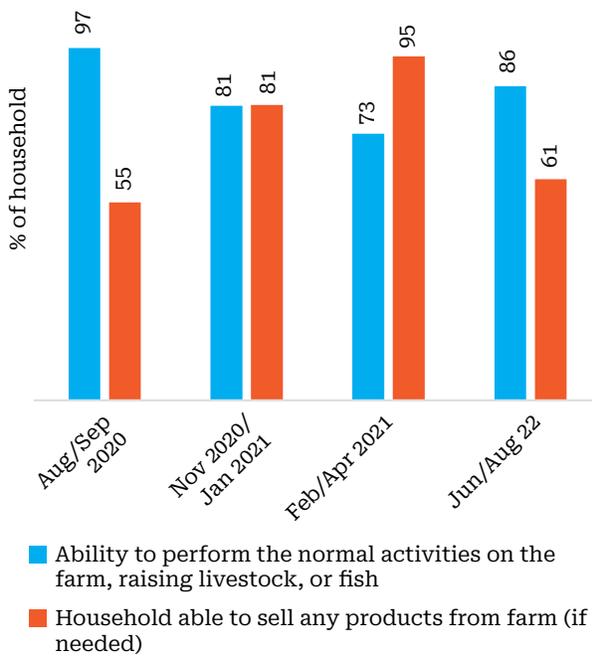
14 percentage points between February–April 2021 and June–August 2022.<sup>12</sup> The impact of the military takeover was particularly severe for poor households, as they were more likely to suffer a reduction or complete (total) loss of income seven months after the takeover (Figure 30).

**Figure 28. Reasons for lower or total loss of revenue among households operating a family business**



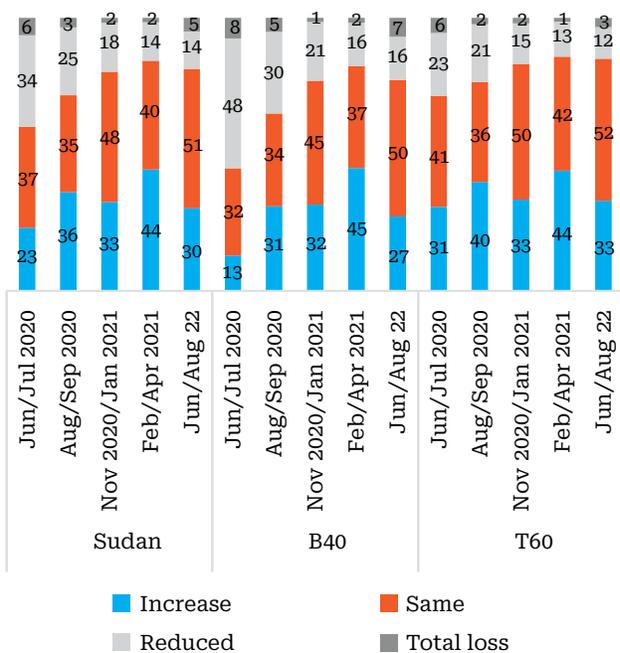
Source: Sudan High-Frequency Phone Survey Round 1 to Round 7.

**Figure 29. Household ability to perform agricultural activities and sell products of farm**



Source: Sudan High-Frequency Phone Survey Round 1 to Round 7.

**Figure 30. Change in household income status, by welfare level**



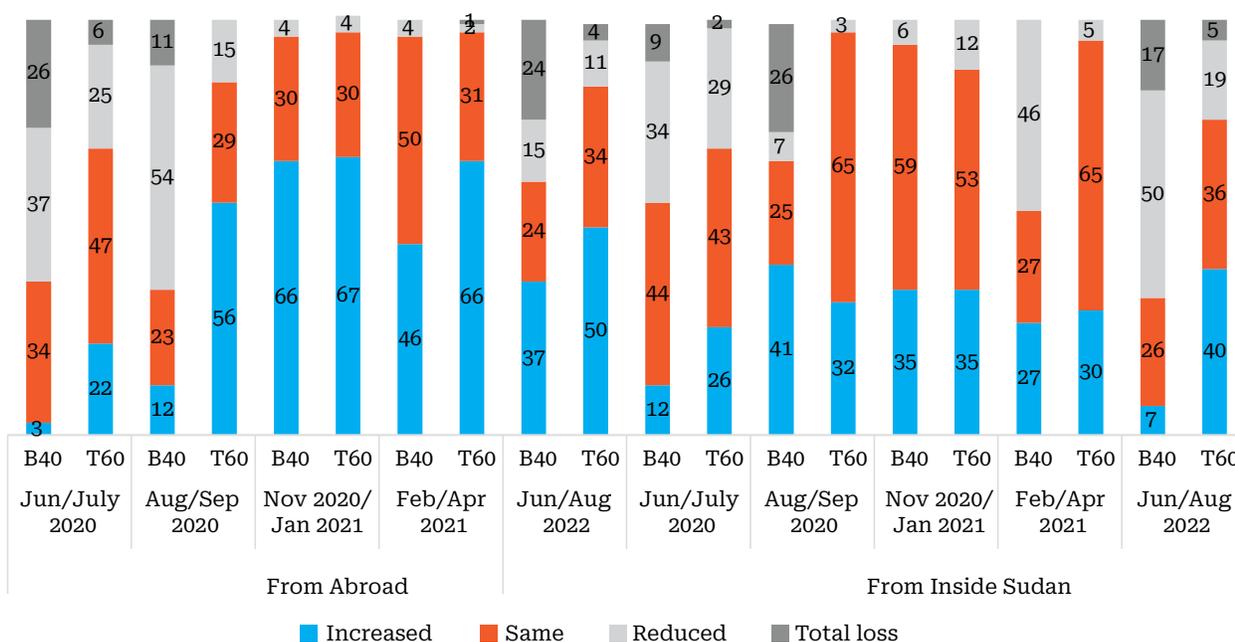
Source: Sudan High-Frequency Phone Survey Round 1 to Round 7.

12 To measure the earnings change, the reference period for June–July 2020 was mid-March 2020 (or since the COVID-19 outbreak), for August 2020–April 2021 the reference period was the previous month, and for June–August 2022 the reference period was the previous 12 months.

### Message 3: Households, particularly poor households, experienced a decline in remittances and transfers following the October 2021 military takeover

**Households experienced a reduction in remittances in 2022 (Figure 31).** Among those surveyed in 2020 and 2022, only about 8 percent of households received remittances, whether from abroad or within Sudan. With the pandemic, around 36 percent of households experienced a reduction or total loss of their remittance income during June–July 2020. This figure declined significantly to 4 percent (of households experiencing reduced remittances) during February–April 2021. This rose to 20 percent (of households experiencing reduced remittances) during June–August 2022 for remittances from abroad and 40 percent for remittances inside Sudan. Initially, remittances helped households cope with the effects of COVID-19, with remittances from abroad increasing from August 2020 to April 2021, then decreasing by 10 percentage points during June–August 2022, as shown in Figure 31. Conversely, remittances from inside Sudan remained relatively stable in 2020 and 2021. Poorer households were more likely to report a reduction or total loss of remittances during June–August 2022 compared to richer households.

**Figure 31. Change in value of remittances received, by origin and welfare of the recipient household (Percent)**



Source: Sudan High-Frequency Phone Survey Round 1 to Round 7.

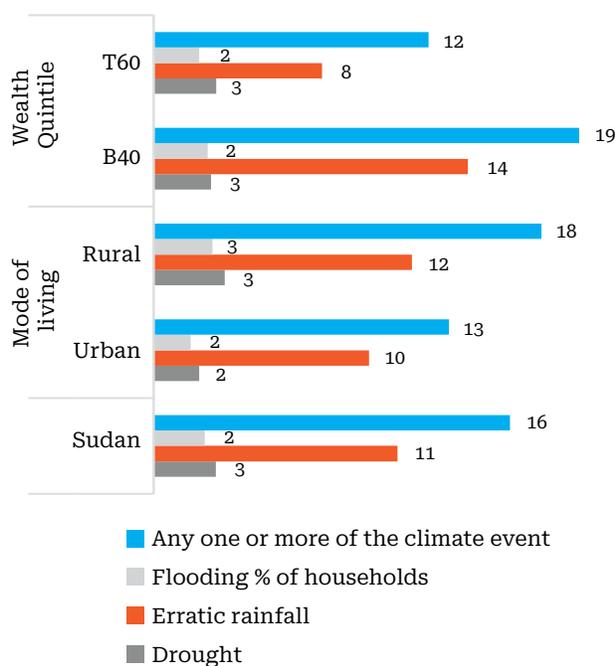
### Message 4: Drought, erratic rainfall, and inflation exacerbated an already dire situation for Sudanese households

**The prevalence of climate shocks has affected a significant portion of households, with one in every six households (during June–August 2022) reporting their occurrence within the previous 12 months.** However, the impact of these climate shocks varies based on socioeconomic factors. Poorer households (19 percent) and rural households (18 percent) were more likely to experience one or more climate events compared to wealthier households in the richest quintiles (12 percent) and urban

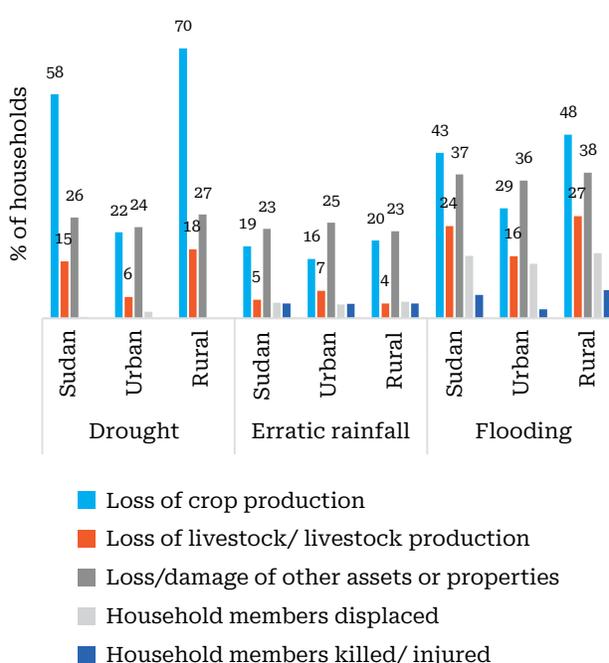
residents (13 percent). Among the different types of climate events experienced by households, erratic rainfall emerged as the most prevalent. Approximately one in 10 households (11 percent) reported being affected by erratic rainfall during the previous 12 months. Rural and poor households were slightly more exposed to erratic rainfall, with rates of 12 percent and 14 percent, respectively, compared to their urban and wealthier counterparts (10 percent and 14 percent, respectively) (Figure 32).

**Erratic rainfall, floods, and drought contributed to loss of crop, livestock, and assets.** Among households impacted by erratic rainfall, both urban and rural areas experienced substantial damage or loss of assets and property. One-fifth of urban households and 23 percent of rural households reported such losses. Drought has particularly devastated rural households, with a staggering 70 percent reporting the loss of crops, compared to 22 percent for urban households. In addition, about one-fourth of urban households (24 percent) and more rural households (27 percent) experienced the loss of assets. Flooding has had a similar impact on both rural and urban households. Approximately half of the households affected by flooding reported the loss of crops, while 40 percent reported the loss or damage of assets. Furthermore, one-fourth of households affected by flooding reported the loss of livestock (Figure 33).

**Figure 32. Households and climate events over past 12 months by region and welfare level (Percent)**



**Figure 33. Shocks to households from climate events over the last 12 months by region (Percent)**



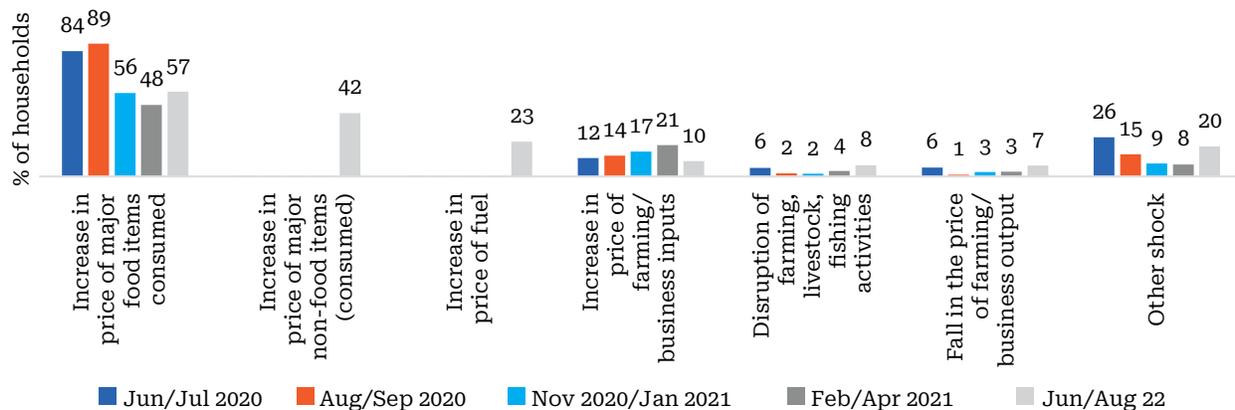
Source: Sudan High-Frequency Phone Survey Round 1 to Round 7.

Source: Sudan High-Frequency Phone Survey Round 1 to Round 7.

**According to the Central Bureau of Statistics, the surge in Sudan’s annual inflation rose from 81.64 percent in March 2020 to a peak of 363.14 percent in April 2021, before declining to 148.8 percent in June 2022.** This was mainly driven by the rise in food and transport prices, which affected 84 percent of households surveyed during June–July 2020. Two years later, this percentage had dropped to 57 percent of households. High food prices have been accompanied by higher prices of major non-food items and fuels.

**Rising food prices were the most significant self-reported negative shock reported by households, regardless of social or demographic level (Figure 34).** Disruptions to farm production, including distribution channels, have compounded the adverse impacts of inflation on household welfare. Nearly 90 percent of households reported an increase in the price of food items as the number one shock adversely affecting their consumption. This figure decreased to about 50 percent in 2021<sup>13</sup>; then during June–August 2022 it increased to nearly 60 percent of households reporting high prices as the factor that caused a reduction in their consumption. The second and third most reported shocks by households (in 2022) were high prices for nonfood items and fuel prices. Twice as many rural as urban households reported the shock of the increased prices of farming items or business inputs, and disruption of farming, livestock, and fishing activities.

**Figure 34. High prices (especially for food) were the main shocks households experienced**



Source: Sudan High-Frequency Phone Survey Round 1 to Round 7.

**Food access and food insecurity deteriorated, with about one in every eight Sudanese households facing severe food insecurity.** Among survey respondents, nearly 40 percent of households were unable to access essential food items. The poorest and female-headed households were particularly affected, with an average 8 percentage points more of households surveyed affected compared to the richest and male-headed households. Moreover, the percentage of households unable to access vegetables more than doubled between 2020 and 2022 (Figure 35). During June–August 2022, almost 80 percent of households were unable to access vital food items due to price increases, compared to 52 percent during June–July 2020. Even for those who were able to access food, the price increase made it difficult to purchase the desired amount. In fact, 92 percent of Sudanese households, irrespective of socioeconomic status, were unable to purchase the desired amounts of staple foods due to price increases.

**According to the Sudan Comprehensive Food Security and Vulnerability Assessment,<sup>14</sup> the main drivers of food insecurity are economic and political crises, conflict, climate shocks, and poor harvests.** Female-headed households and the bottom 20 percent of households have been disproportionately affected, with more than 50 percent of these households experiencing moderate to

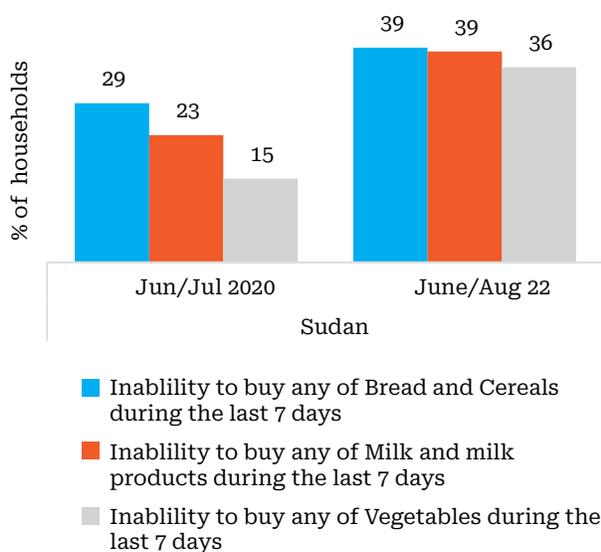
<sup>13</sup> Osman et al. 2022.

<sup>14</sup> <https://reliefweb.int/report/sudan/sudan-comprehensive-food-security-and-vulnerability-assessment-cfs-va-summary-report-q1-2022-june-2022>.

severe food insecurity. Half of these households have been classified as severely food insecure (Figure 36).

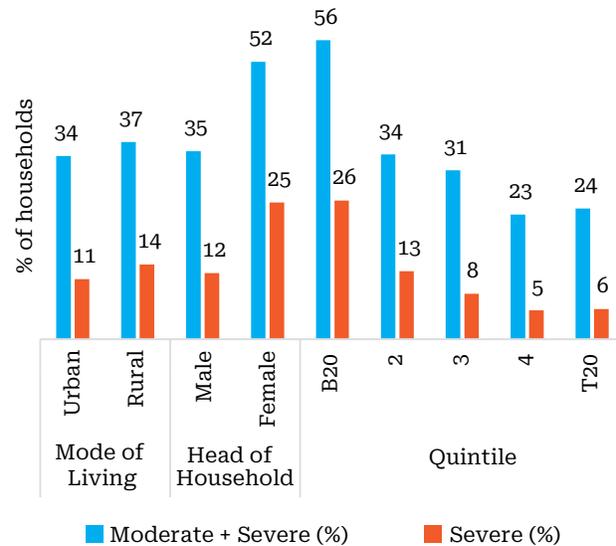
**The pandemic contributed to a reduction in the availability of farming inputs; further, the military takeover undermined the ability of agricultural households to produce.** Agricultural households cited the high cost of inputs, high fuel prices, and scarce labor as factors constraining their production, and the military takeover compounded these effects. The reasons why households were unable to perform their farming activities normally varied across the two-year period of the survey. In the months of COVID-19 (June–September 2020), households that were unable to work on their farms stated several reasons, such as anticipating the rainy season (during June–July 2020), concerns about the increased prices of inputs (during August–September 2020), and the rise in fuel prices. During the peak of COVID-19 cases (November 2020–January 2021), input prices and the lack of labor increased. By February–April 2021, 42 percent of those who were unable to work stayed home, particularly among male-headed households. During June–August 2022, households indicated that the political situation and the inability to acquire inputs were the main factors constraining their farming activities (Figure 37).

**Figure 35. Inability to access staple food items in the past 7 days when needed (Percent)**



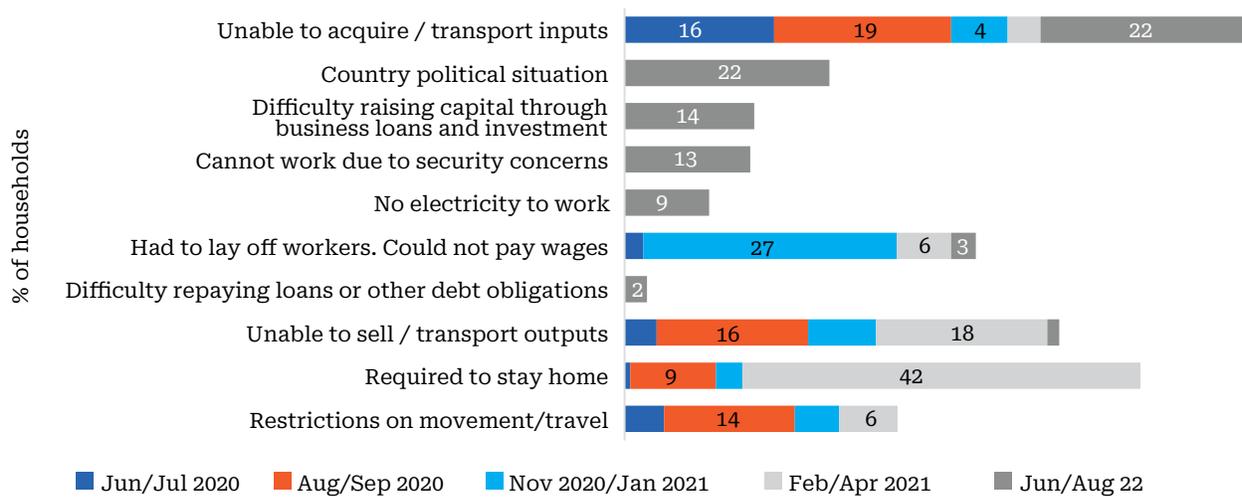
Source: Sudan High-Frequency Phone Survey Round 1 to Round 7.

**Figure 36. Prevalence of food insecurity, by group**



Source: Sudan High-Frequency Phone Survey Round 1 to Round 7.

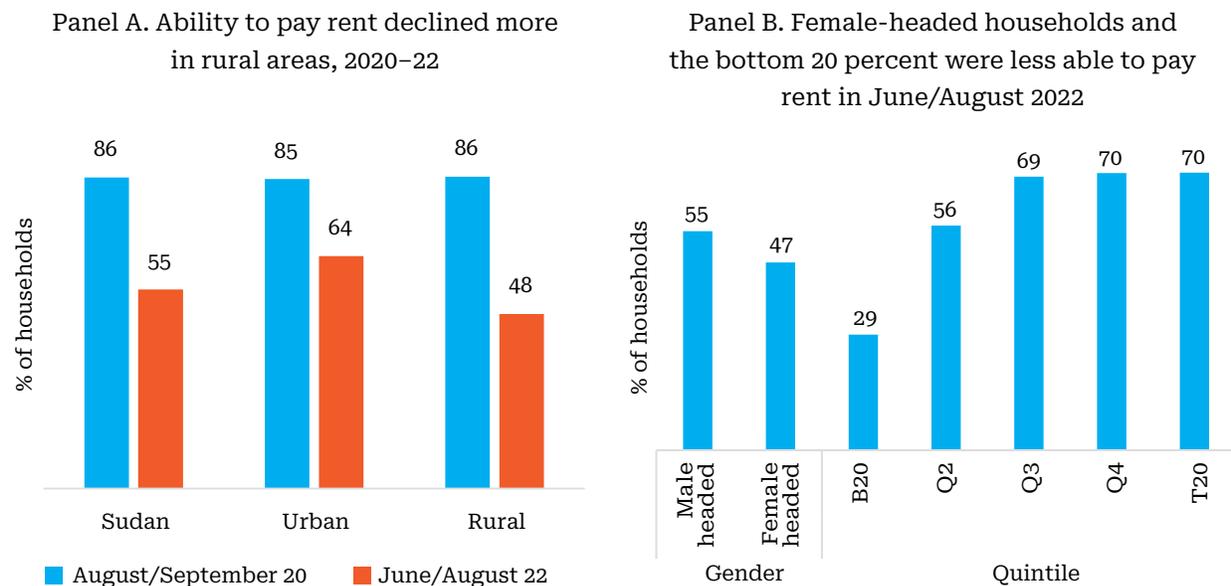
**Figure 37. Reasons for not being able to perform normal agricultural activities (farm, livestock, and fishing) (Percent)**



Source: Sudan High-Frequency Phone Survey Round 1 to Round 7.

**The ability to pay rent became increasingly difficult after the military takeover.** Among the sample surveyed, 17 percent in rural areas and 25 percent in urban areas reported renting their homes. During June–August 2022, an increasing number of households struggled to pay rent; only 55 percent of households that rented were able to afford it in 2022, which marks a significant decline compared to 2020, when almost 90 percent could afford to rent. The impact is particularly pronounced in rural areas, where only 48 percent of households that rent could afford it, compared to 64 percent in urban areas (Figure 38, panel A). Poorer households were significantly less likely to afford rent, with only 33 percent able to pay, compared to 70 percent of the richest households. Female-headed households are also more affected than their male counterparts (47 percent and 55 percent, respectively) (Figure 38 panel B).

**Figure 38. Household ability to pay rent for the next month declined after the military takeover**



Source: Sudan High-Frequency Phone Survey Round 1 to Round 7.

Source: Sudan High-Frequency Phone Survey Round 1 to Round 7.

**Demand for health services increased significantly in 2022.** The number of households requiring health services in Sudan, particularly in rural areas, almost doubled during June–August 2022 compared to 2020. This trend is closely linked to the rise in disease outbreaks, including malaria and measles, as reported in “Sudan Humanitarian Situation Report No. 2 (April–June 2022).”<sup>15</sup> However, despite the growing need for health services, accessibility has declined by 7 percentage points for rural households. The poorest households are particularly affected, with only 55 percent able to access health services when needed, compared to more than 80 percent of the richest households (Figure 39). Pharmaceutical and laboratory testing services were the most sought-after health services, with approximately 50 percent of the households in need of pharmaceutical services and 45 percent in need of laboratory testing services. This low rate of access to health services for rural households most likely also reflected the scarcity of such services in rural areas.

**In contrast, access to education services suffered in 2022.** Overall, the children in less than 10 percent of households with children were engaged in education activities between June 2020 and January 2021. This was due to government school closings and the prohibition, on March 14, 2020, of mass gatherings. By February/April 2021, as the effects of the pandemic subsided and government restrictions eased up, the share of households with children engaged in education activities shot up to 30 percent. This figure dropped to 11 percent in 2022, following the military takeover. Similar trends were observed among male-headed households. In contrast, children’s engagement in education activities did not recover as strongly in female-headed households. Only 19 percent of children in female-headed households were engaged in education activities by February/April 2021. In 2022, this figure stood at 17 percent for female-headed households.

**Accessibility to drinking water has deteriorated, reaching the highest level of disruption in 2022.** Almost 80 percent of households reported that the main issue for insufficient drinking water was the unavailability or reduction of water supply. More than 40 percent of Sudanese households could not meet drinking water needs in the last seven days before the survey, indicating a deterioration in the accessibility of sufficient drinking water between 2020 and 2022. This trend is consistent across all households, regardless of their living conditions. The percentage of households experiencing insufficient drinking water doubled during June–August 2022, with shortages observed from April 2022.<sup>16,17</sup> The poorest households were more severely affected, with half experiencing insufficient water access compared to only one-third of the richest households. Supply disruptions were the primary reason for insufficient access to drinking water, with almost four in every five households identifying a lack of or reduction in the supply of water as the main issue (Figure 40).

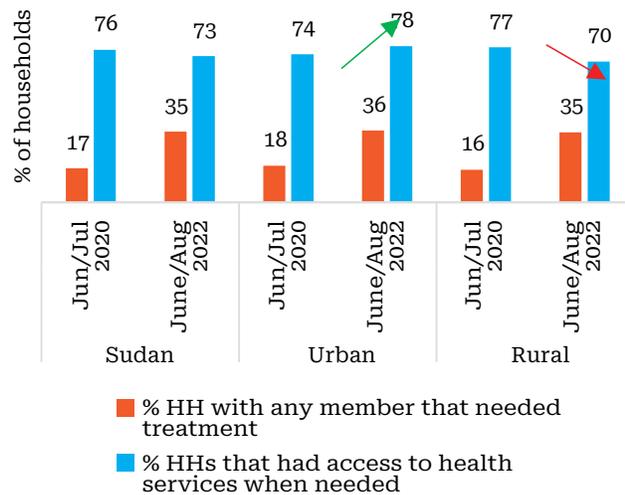
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15 UNICEF 2022.

16 <https://www.dabangasudan.org/en/all-news/article/water-crisis-felt-across-sudan>.

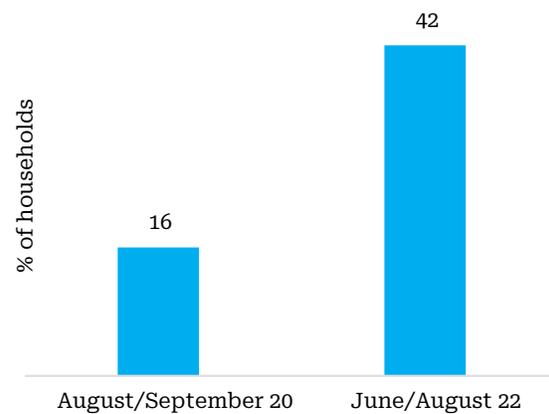
17 <https://www.dabangasudan.org/en/all-news/article/sudan-s-drinking-water-crisis-continues>.

**Figure 39. Access to health services was declining in 2022**



Source: Sudan High-Frequency Phone Survey Round 1 to Round 7.

**Figure 40. More households were unable to access drinking water to meet their needs in the last 7 days (Percent)**



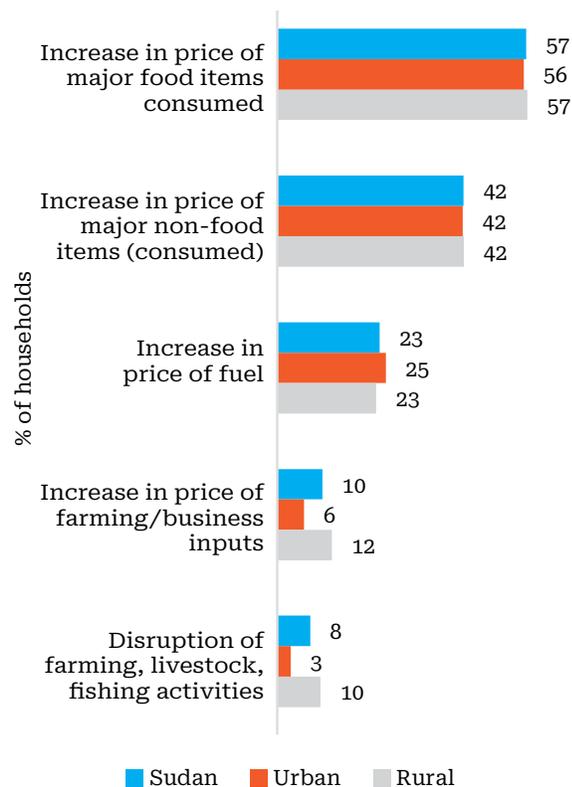
Source: Sudan High-Frequency Phone Survey Round 1 to Round 7.

**Message 5: Households adopted detrimental and ineffective coping strategies, including reduced consumption and a shift from farm to nonfarm or wage-earning activities**

**The main coping strategy has entailed shifting or reducing consumption.** Most households surveyed experienced shocks to their food consumption and accommodated that shock by reducing food consumption (Figures 40 and 42). Specifically, during June–August 2022, nearly 60 percent of households that experienced price increases for food and non-food items opted to reduce consumption of these items as a primary coping strategy – a notable increase compared to the previous year. The second most common coping strategy was to take no action at all, with about one-third of households choosing this strategy. Across income levels, poorer households (24 percent) were more likely than wealthier households (3 percent) to engage in other income-generating activities when dealing with nonfarm business closures. As prices increased, richer households (16 percent) were more likely to rely on savings to buy farming and business inputs compared to poorer households (3 percent) (Figure 42).

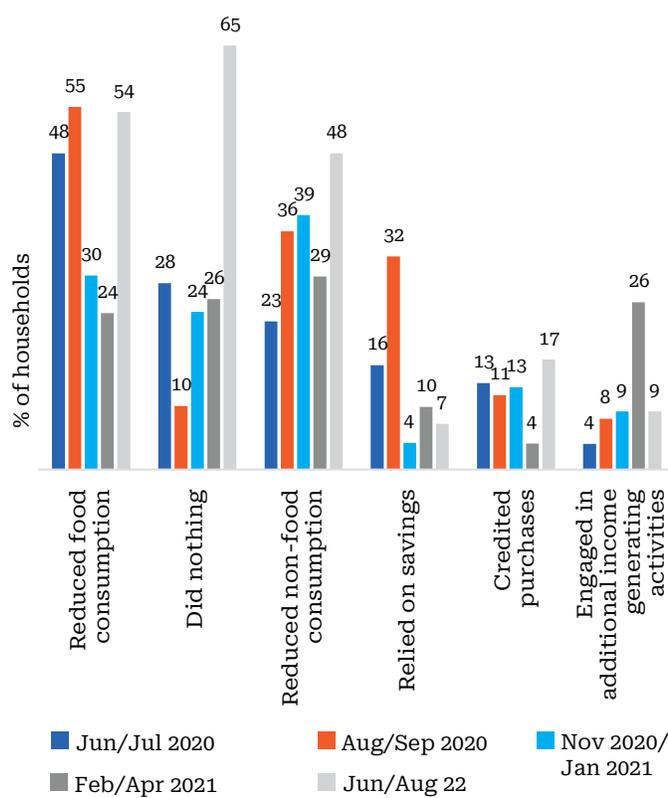
**Another important coping measure has been to shift income sources.** Sudanese households have shifted or substituted their primary income sources away from family farming of livestock and fishing in response to changing economic conditions. From November 2020, an increasing number of rural households that experienced disruptions of farming activities (including livestock and fishing) have turned to wage employment or a nonfarm family business as alternative sources of income (Figure 43). This trend was observed following the major shocks of the COVID-19 pandemic and the military takeover. During June–July 2020, six months after the pandemic hit, the percentage of households reporting family farming as their primary source of income dropped by a significant 15 percentage points, and again, after seven months (following the military takeover), households reporting family farming decreased to only 13 percent from 47 percent during February–April 2021.

**Figure 41. Five most common shocks to households in 2022**



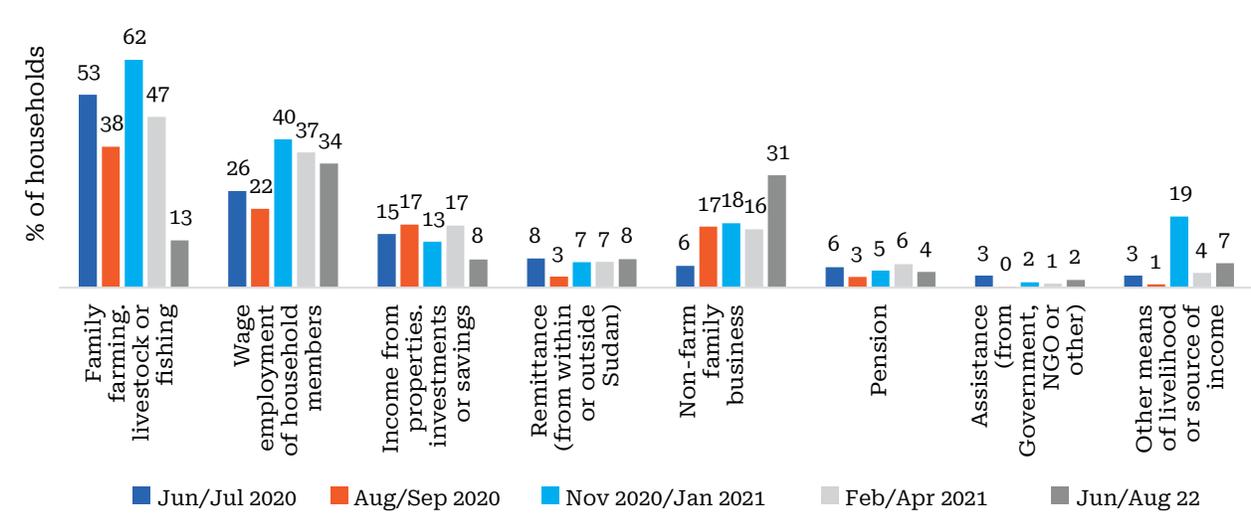
Source: Sudan High-Frequency Phone Survey Round 1 to Round 7.

**Figure 42. Five main household coping strategies**



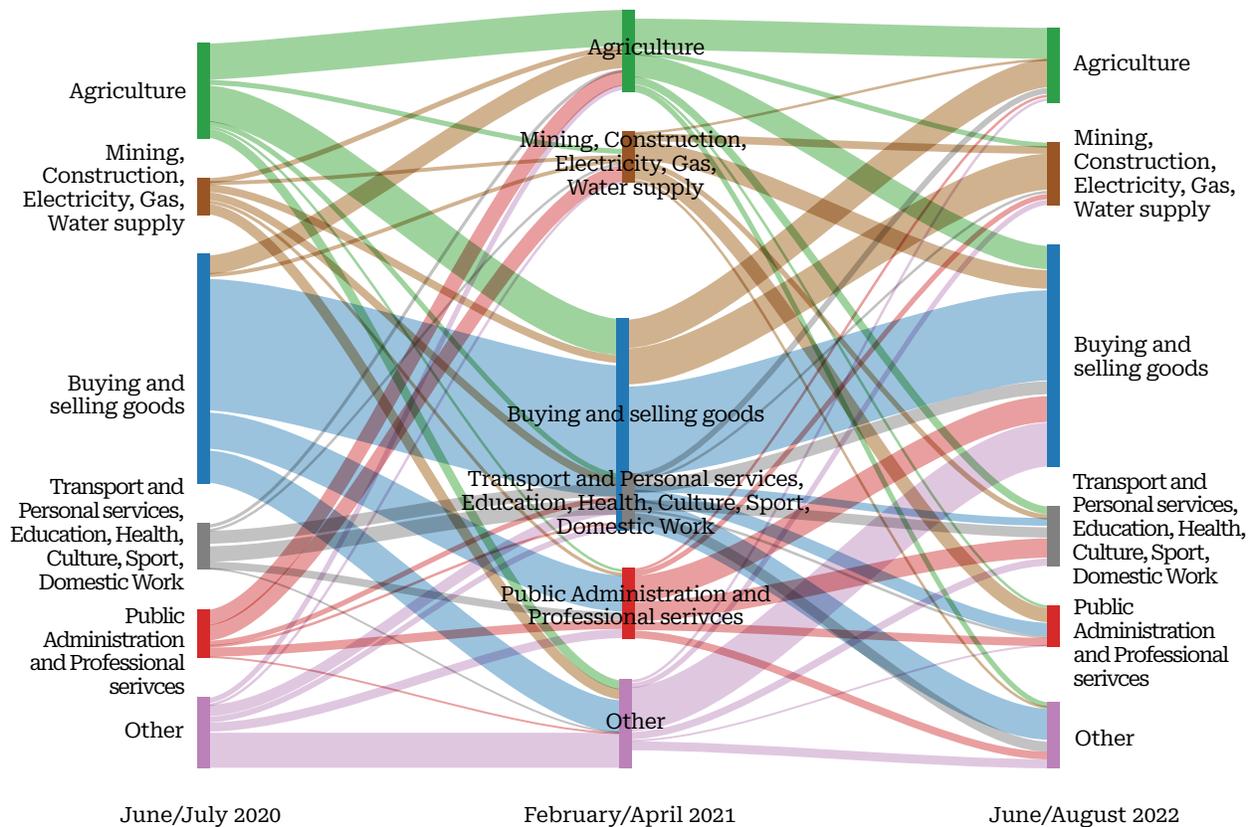
Source: Sudan High-Frequency Phone Survey Round 1 to Round 7.

**Figure 43. Household sources of income**



Source: Sudan High-Frequency Phone Survey Round 1 to Round 7.

**Figure 44. Sectoral job changes, 2020–22**



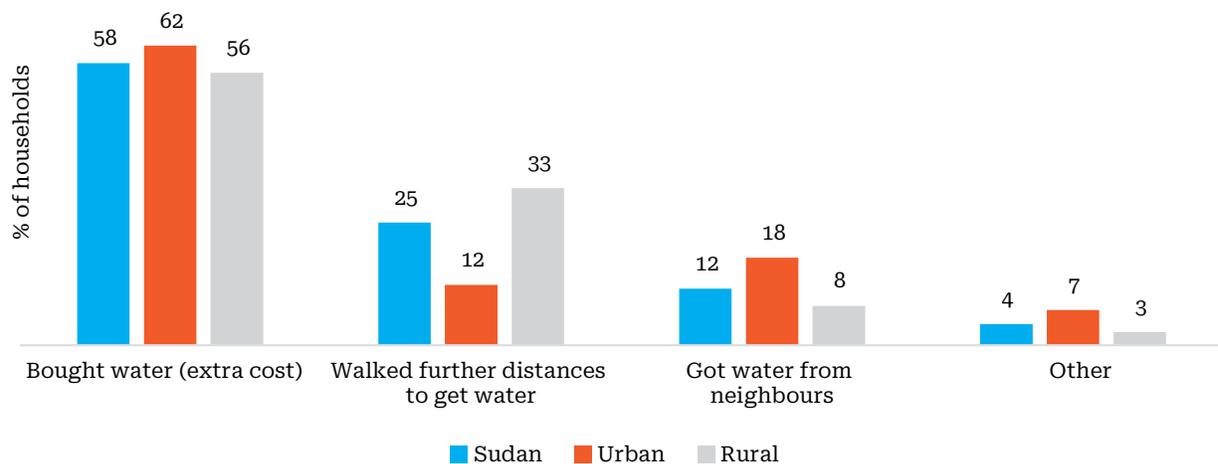
Source: Sudan High-Frequency Survey Round 1, Round 4, and Round 7.  
 Note: Diagram made with SankeyMATIC.

**Meanwhile, the share of households relying on wage employment or nonfarm family businesses significantly increased.** The proportion of households relying on nonfarm businesses doubled since 2021, while the percentage of those stating wage employment as their main source of income increased by 8 percentage points between August–September 2020 and June–August 2022 (Figure 43). The tendency to switch to nonfarming income sources as income from farming declines was similar for respondents from both male-headed and female-headed households. However, female-headed households (40 percent) are more likely to shift toward income from property, investments, or savings compared to male-headed households (33 percent); and males are more likely to engage in wage employment (31 percent) compared to female-headed households (20 percent). In addition, female-headed households are more likely to have income from pensions and remittances within Sudan, while male-headed households are more likely to have income from assistance provided by nongovernmental or charitable organizations. Overall, households switched or substituted jobs to earn more money (54 percent). Other reasons for switching jobs were due to seasonal work (reported by 18 percent of households) and the current political situation. Despite these challenges, workers have shown resilience and adaptability in responding to changing conditions in the labor market (Figure 44).

**Buying and selling goods and services were the most common occupation for both rural and urban workers<sup>18</sup> surveyed.** More than 40 percent of respondents worked in these sectors, and the majority of those changing jobs were from sectors buying and selling goods and services. Half the respondents in this sector moved to other sectors between 2020 and 2021, including public administration and professional services (16 percent), agriculture<sup>19</sup> (8 percent), transport and personal services (8 percent), and other sectors (14 percent). In 2022, roughly 40 percent of households engaged in buying and selling (or trading) moved to construction, agriculture, and other sectors. The percentage of agricultural workers has been declining, with most moving to buying and selling goods, and a few to personal services and mining. The share of workers in construction, in contrast, has been increasing, with most of those who worked in public administration moving to this sector in 2021, and from buying and selling in 2022. Changes in mining and manufacturing, transport, and other activities have been minimal.

**Households have increased out-of-pocket expenses in order to maintain access to services.** For example, to cope with an inadequate drinking water supply, more than half of households (across the board) had to pay extra to obtain water. As a second coping strategy, one-third of rural households had to walk long distances to obtain water, while about one-fifth of urban households obtained water from their neighbors (Figure 45).

**Figure 45. Main methods of coping with insufficient drinking water, 2022**



Source: Sudan High-Frequency Phone Survey Round 1 to Round 7.

## Message 6: A quick end to the conflict, return to political stability, reforms, and investments are critical for inclusive growth and resilience

**Only 1 percent of households reported receiving social assistance prior to the current conflict.** The available types of social assistance included free food, direct cash transfers, and other in-kind transfers (excluding food). Urban households were more likely to receive direct cash and other in-kind transfers, while rural households received more free food, which combined comprised less than 1 percent of households. However, the small proportion of households receiving social assistance may be due to the fact that the sample population mainly consisted of highly educated individuals, phone owners,

18 This also includes repair of goods and working in hotels and restoration.

19 Agriculture, hunting, fishing.

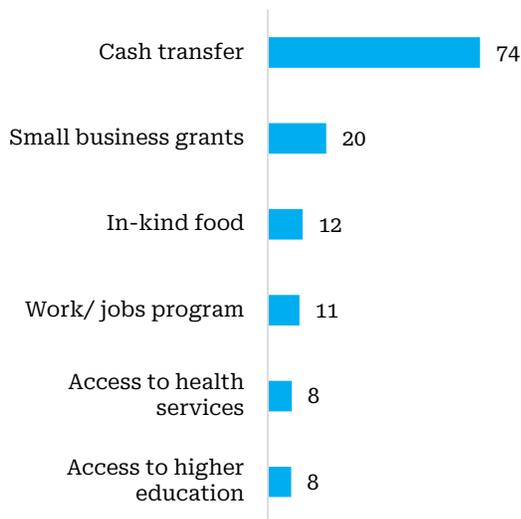
and urban residents. International organizations and nongovernmental organizations (NGOs) were the primary sources of social assistance for households. International organizations mainly provided free food and direct cash transfers, while NGOs provided other in-kind transfers.

**Yet, most households in Sudan need support, with cash transfers being the most requested form of assistance (Figure 46).** Approximately three-quarters of households reported needing cash transfers, followed by small business grants (20 percent) and in-kind food (12 percent). This need for support is consistent across different modes of living, indicating a widespread need for assistance.

**Social assistance was primarily financed with external resources that were subsequently paused, thereby limiting its coverage.** As a result, social assistance programs (which were previously limited) are now even more scarce if not nonexistent during the ongoing conflict, with major social programs either on pause or humanitarian efforts just beginning. One such program was the Sudan Family Support Program, which was launched in February 2021 with the aim of delivering US\$5 in cash to 80 percent of Sudanese households.

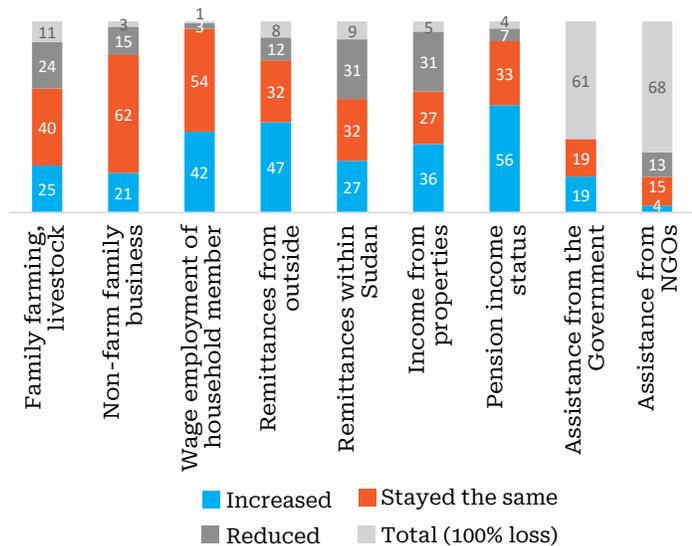
**More than three-fifths of households that previously received assistance from the government and NGOs have reported a total loss of income.** Also, as noted above, one-third of households reported a reduction in both foreign and domestic remittances (Figure 47). In response to the crisis faced by vulnerable Sudanese, the World Bank initiated a new project in collaboration with the World Food Program to transfer cash and food to poor households, starting transfers of US\$9 during August–September 2022. However, prior to this intervention, only 7 percent of households had benefited from any form of social assistance as of June–July 2020, and there was no significant improvement in subsequent years.

**Figure 46. Six most-needed forms of assistance, in 2022**



Source: Sudan High-Frequency Phone Survey Round 7.

**Figure 47. Change in income in the last 12 months, by type**



Source: Sudan High-Frequency Phone Survey Round 7.

## Annex 1. Government Response to COVID-19 and Lessons Learned

### **The Government's response to the COVID-19 pandemic in Sudan was swift but faced challenges.**

Strict measures included the closure of airports, ports, land crossings, and the imposition of a countrywide curfew. Enforcement was challenging due to the dominance of the informal sector and an already contracting economy (ILO 2021).

### **Despite the challenges, various ministries played essential roles in responding to the pandemic.**

The Ministry of Labor and Administrative Reform (MoLAR) implemented a program to support informal workers through in-kind and monetary assistance. However, a lack of data, coupled with logistical barriers, hampered monitoring and evaluation and effective implementation (ILO 2021).

### **The Ministry of Health (MoH) coordinated efforts with international organizations, private sector companies, and other government ministries to combat the spread of the virus.**

Communication campaigns on preventive measures and expanded testing facilities were significant components of their strategy. The MoH's focus shifted to vaccination rollout, with efforts to prioritize vulnerable groups. The Ministry of Trade and Industry (MoTI) pursued interventions to ensure affordable prices for specific food items and tackled price inflation by removing intermediaries from the supply chain (ILO 2021). The Ministry of Finance (MoF) adopted a new salary structure and allocated more resources to the line ministries, but was unable to fully implement its strategy. MoF implemented the new salary structure in May 2020, by increasing public wages more than 100 percent. The initial plan was to provide resources to the line ministries to implement the mitigation measures, including allocation of SDG 10 billion to implement the MyCommodity program through the MoTI, with more resources to the MoH (of around SDG 30 billion). However, the MoF was unable to fully implement its strategic plan for 2020, because the pandemic had contributed to reducing government revenue and limiting external funding sources (ILO 2021).

### **The education sector faced significant challenges in providing equal learning opportunities to all students during the COVID-19 pandemic.**

TV and radio programs were practical tools for remote learning, but reaching vulnerable students and measuring access was difficult. Complementary physical materials, like booklets, were essential in reaching the most vulnerable students who lacked access to TV and radio. TV programs were more effective than radio programs for children's learning, but disparities in TV ownership in disadvantaged areas remained a hurdle. School grants played a vital role in reducing the financial burden on families and sustaining enrollment during the pandemic, as many families lost their income and struggled to cover education costs. The provision of school grants under the World Bank's Basic Education Emergency Support Project and the COVID-19 Response Project helped ensure free basic education and supported student enrollment (World Bank 2022).

### **Sudan's experience with the pandemic highlighted several important lessons.**

First, regular monitoring and evaluation is critical for targeting services and assessing effectiveness of delivery to adjust course as needed. Second, a strong and resilient health system is better able to withstand a widespread shock such as the pandemic. COVID-19 highlighted the weaknesses in the health system and emphasized the need to strengthen the system both in terms of physical investments and provision of services. Third, stronger coordination among government institutions, and partnerships with international organizations and donors, could help to more effectively use scarce resources. Fourth, building social protection systems to support vulnerable populations is crucial in times of crisis, and flexible strategies are required to adapt to changing circumstances. The collaboration among various stakeholders and ministries was instrumental in responding effectively to the pandemic (ILO 2021).

## Annex 2. Survey Methodology and Challenges

**The Sudan High-Frequency Phone Survey (HFS) is a collaboration between the World Bank and Sudan's Central Bureau of Statistics that aims to monitor the COVID-19 crisis and its impact on households and firms in Sudan.** The Sudan HFS collects household (and firm-level) information quickly by phone and assesses the dynamics of the impact of COVID-19 on households (and micro, small, and medium-sized enterprises) in the country.

**The household component of the survey was conducted between June 2020 and August 2022 and included seven rounds.** It covered changes in behavior due to COVID-19, access to basic services and staple foods, access to educational activities during school closures, employment dynamics, household income and livelihood, income loss, coping strategies, and assistance received.<sup>1</sup>

**Unlike traditional household surveys in which interviews take place face to face, the Sudan HFS called registered phone numbers in each state.** Each household is represented by an individual older than age 18. Distribution among states is proportional to the number of mobile phones in the frame of each state. Scale weights were used to correct the imbalances for mode of living (urban or rural).

**The analysis is based on a sample of households that varied across rounds, ranging from 4,027, 2,987, 2,987, 2,659, 2,783, 2,179, and 2,816 households for, respectively, Round 1, Round 2, Round 3, Rounds 4 and 5, Round 6, and Round 7 in both urban and rural areas across the 18 Sudanese states.** The sampling frame used for the survey was a compilation of a list of phone numbers collected during the implementation of various projects or surveys during the last few years at the household level across the country.

**There were several challenges to interpreting results.** First, the survey was limited to households with valid phone numbers, which may exclude those without phone access and lead to underrepresentation of certain areas or populations. In particular, the poorest and most vulnerable households with no or limited access to a phone may be excluded from the survey, resulting in an incomplete picture of the pandemic's impact on these groups. Second, subsequent rounds witnessed attrition in the sample size,<sup>2</sup> due to inactive or incorrect phone numbers, also possibly linked to poor network connectivity. Finally, relying on phone interviews with knowledgeable household members or heads may not always accurately capture the perspectives of all household members, and the limited scope of phone interviews may restrict in-depth exploration of certain issues. Despite these challenges, phone surveys remain valuable for data collection in difficult circumstances, enabling sound monitoring of the impact of shocks on households. However, it is important to consider their limitations when interpreting the results.<sup>3</sup>

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### Note:

1 More details on the methodology and metadata are accessible through <https://microdatalib.worldbank.org/index.php/catalog/12857>.

2 The pattern of household attrition between Rounds 1 and 7 trended from 4,027, 2,987, 2,987, 2,659, 2,783, 2,179, down to 2,816 households.

3 More information on sample size, attrition, and methodology can be found at: <https://microdatalib.worldbank.org/index.php/catalog/12857>.

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