South Sudan

Joint Market Initiative (JMMI) Trend Analysis

August 2019 - December 2022

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1. EXECUTIVE SUMMARY

The economy of South Sudan remains heavily dependent on oil exports,[1] with limited economic opportunities and production bottlenecks in the oil sector highlighting the need for economic diversification.[2] The financial situation has deteriorated since the country gained independence from Sudan in 2011. Before the economic depreciation, South Sudan qualified as a middle-income country according to its per capita Gross Domestic Product (GDP).[3] However, even after the revitalised peace agreement was signed in 2018, the economic recovery was limited.[4] South Sudan remains highly vulnerable to conflict and climate-induced shocks, which have heavily affected the people and the economy.[5]

In addition, the South Sudanese economy was affected in the first quarter of 2020 by the outbreak of the global COVID-19 pandemic, which caused oil prices to plummet as a worldwide economic cooldown took place.[6] During the COVID-19 outbreak, measures taken to reduce the spread of the virus led to border closures and restricted mobility on supply routes, which affected the availability of goods in markets. The International Monetary Fund (IMF) disbursed grants totalling 334 million United States dollars (USD) between November 2020 and August 2021 to support the economy.[7] The IMF grants triggered economic reforms by the government. The official exchange rate fixed for nearly ten years was allowed to float freely starting in April 2021; consequently, at the beginning of August 2021 the official and parallel exchange rates were unified at the market value. As a result, foreign reserves were boosted, which helped to tackle the rising inflation driven by the South Sudanese Pound (SSP) depreciation.

The rapidly changing exchange rates have had a tangible impact on increasing prices, as South Sudan imports the vast majority of its goods. Before the economic reforms with the support of the World Bank, between July 2020 and April 2021, the gap between the official and parallel rates continually increased, which drove commodities prices upwards to a peak in the last quarter of 2022.[8] The war in Ukraine that started in February 2022 also posed global economic challenges, again leading to high fuel and food prices.[9]

This report presents an analysis of longitudinal data collected by the Joint Market Monitoring Initiative (JMMI) monthly throughout South Sudan since August 2019, with a focus on the period of January 2022 to December 2022 for some specific sections, to provide a comprehensive analysis of market developments.[10] The report aims to use the Joint Market Monitoring Initiative (JMMI) data to quantify

[1] World Bank: South Sudan Economic Monitor - 2022
[2] World Bank South Sudan Report
[3] International Crisis Group, Oil or Nothing: Dealing with South Sudan's Bleeding Finances (Africa Report N°305), October 2021
[4] The University of Edinburgh, Revitalised agreement on the Resolution of the Conflict in the Republic of South Sudan (R-ARCSS), 2018
[5] OCHA. HUMANITARIAN NEEDS OVERVIEW SOUTH SUDAN, January 2021
[6] MaketWatch, Crude Oil WTI (NYM $/bbl), December 2021
[7] Bank of South Sudan, SOUTH SUDAN RECEIVES USD 334 MILLION FROM THE IMF – Bank of South Sudan, August 2021
[8] South Sudan Economic Update, December 2022
[9] WFP South Sudan Situation Report - July 2022
[10] As the analysis was initially conducted in early 2023, the research team decided to focus on the 2022 market trends to provide an analysis of the most recent market developments at this time of the analysis.

some of the major changes observed in markets in humanitarian contexts. The analysis revolves around comparisons of key indicators to discover trends, as well as developing initial, non-causational hypotheses regarding the connection of these trends to global events such as the COVID-19 pandemic, macro-economic challenges, the Ukraine war, and local or national dynamics. This trend analysis report aims to inform humanitarian partners about the patterns of market dynamics for effective evidence-based and strategic decision-making on cash and voucher-based programming in South Sudan. It is worth noting that this report does not cover the the outbreak of conflict in Sudan that started in April 2023, and its impact on the South Sudanese economy.

The report includes sections on key events and shocks affecting South Sudan, trends in the Multi-Sector Survival Minimum Expenditure Basket (MSSMEB) and Food Price Index (FPI), market functionality, factors affecting market functionality, the key supply routes, market constraints and case studies comparing a sample of urban and rural markets.

From a micro-economic perspective, vendors reportedly dealt with immense market frictions from the poor state of infrastructure and security issues, as well as problems with liquidity. Conflict and insecurity along the trade routes are two of the major impediments to market functionality and access by community members. Seasonal flooding remains a barrier to market access and functionality, due to restricted mobility and reduced supply of goods.

Key findings

South Sudan remains economically vulnerable due to increasing debt and plummeting global oil prices. These continue to make markets extremely volatile, affecting prices and market functionality. External shocks caused by the effects of the COVID-19 pandemic, flooding, conflict, and secondary effects of the Ukraine war on the global economy have further limited trade by impeding transport and supply of goods, hence increasing the cost of goods.

Fluctuations in exchange rates remained a key driver of commodity prices. The MSSMEB prices across South Sudan continually rose over time. In December 2022, 1 USD was exchanged at a rate of 643 SSP on the parallel market, as compared to the August 2019 JMMI baseline value of 295 SSP, an increase of 118%.

Monetary and fiscal reforms were launched in the second quarter of 2021 to unify the parallel-market and official exchange rates. The Bank of South Sudan stopped using the official exchange rate on 4 August 2021 and transitioned to the unrestricted exchange rate. Previously, the highest difference between the official and parallel-market rates was recorded from January to April 2021, the highest being March 2021 when a difference of 443 SSP was recorded, equivalent to a parallel-market rate 249% higher than the official rate. Since then, the gap has progressively decreased with the unification of exchange rates, supported by the IMF.

Prices of goods: The MSSMEB and FPI costs were on upward trends from July 2020 to April 2021, then gradually dropped until February 2022. From March 2022, the costs began to increase again and spiked to a record high in September 2022, with a MSSMEB cost of 92,461 SSP, representing a 173% increase as compared to the baseline value in August 2019, which was at 33,818 SSP. This increase could be attributed to the deterioration of the economy and high inflation rates.

Key item prices: Imported food items such as wheat flour, rice, sugar, cooking oil, beans etc. corresponded to increasing and decreasing trends of the MSSMEB costs, since food items composed a significant part of the MSSMEB. The sole exception is the price of locally produced groundnuts that

largely stabilized over time. Non-food items, particularly the imported ones such as soap, mosquito nets and jerrycans, experienced similar increases in prices over time.

Limited market integration: Many market systems across the country are facing low capacity and resilience due to negative effects of poor infrastructure, insecurity, high taxation, checkpoints, border crossing limitations and lack of capital on the side of the vendors, which hinders market functionality. As a result, market integration is limited; the availability of basic items is not always guaranteed, especially in remote marketplaces, and price levels show strong variation throughout the country.

Market functionality: The majority of markets across the country are facing functionality issues, especially the markets that are based in rural and peri-urban areas. Markets in areas with high agricultural production prospects and those situated in close proximity to border crossings are relatively functional, which has a positive multiplier effect on the MSSMEB cost and FPI, unlike areas with shortfalls in market functionality, such as hard to reach areas. Based on JMMI data collection from January to December 2022, on average, 36% of the assessed markets were reported functional, 52% with limited functionality (where many items were unavailable and/or prices were relatively high), 10% with poor functionality (where staple cereals were largely unavailable and prices were very high) and 2% could not provide an indication on the level of market functionality due to data quality.

Road and river accessibility: Road and river networks are key determinants of market functionality in South Sudan. Of the 104 roads assessed by JMMI between January 2022 and December 2022, 38% were reported as normally open, 38% irregularly open, and 5% closed, while 19% had insufficient data which could not provide a substantial indication on the level of accessibility. Regarding river conditions, out of the 13 river points assessed, 9 river points were reported normally open, one river point was reported to be irregularly open, one was reportedly closed, while the accessibility of two river points could not be determined as there was insufficient data.

Rural markets appear to be more prone to shocks and attain higher price levels compared to urban markets. Urban markets often serve as redistribution centres that supply rural markets, meaning that any disruptions in the urban supply chain negatively impact rural markets.

CONTENTS

List of acronyms

BoSS	Bank of South Sudan
CALP	Cash Learning Partnership
CVA	Cash and Voucher Assistance
CARB	Complimentary Action for Resilience Building
ETB	Ethiopian Birr
FPI	Food Price Index
GBeG	Greater Bahr-el Ghazal
GDP	Gross Domestic Products
GQ	Greater Equatoria
GUN	Greater Upper Nile
IMF	International Monetary Fund
IACWG	Inter-Agency Cash Working Group
IPC	Integrated Food Security Phase Classification
IDPs	Internally Displaced Persons
JMMI	Joint Market Monitoring Initiative
MSSMEB	Multi-Sector Survival Minimum Expenditure Basket
MFI	Market Functionality Index
NGOs	Non-Governmental Organizations
NFIs	Non Food Items
ODK	Open Data Kit
SSP	South Sudanese Pound
SDG	Sudanese Pound
TWG	Technical Working Group
USD	United States Dollar
WFP	World Food Programme
GBeG	Greater Bahr-el Ghazal
GQ	Greater Equatoria
GUN	Greater Upper Nile

Geographical classifications

This trend analysis report covers an analysis of JMMI data collected from various marketplaces in South Sudan. The coverage depends on Cash Working Group partners submitting data from that location on a monthly basis. The coverage of marketplaces per month can be accessed on the JMMI Dashboard.[11]

[11] JMMI Dashboard

2. INTRODUCTION

Eleven years after independence in 2011 and four years after the signing of a revitalized peace agreement which was finalized in September 2018, populations across South Sudan continue to face worsening humanitarian conditions, which are aggravated by a multitude of factors including endemic insecurity, economic shocks, public health challenges, flooding, and droughts. Since 2013, approximately 2.2 million people have been internally displaced and more than 2.3 million South Sudanese refugees are hosted in neighbouring countries, while an estimated 9.4 million people will be in need of humanitarian assistance in 2023.[12] The severity of food insecurity continues to grow due to compounding shocks that are amplified by intensified sub-national violence, three consecutive years of widespread flooding, localized dry spells, indirect effects of the COVID-19 pandemic, and a protracted macro-economic crisis with heightened poverty and vulnerability (more than 80% of the population is reportedly below the poverty line).[13] As a result, the prices of food items continue to increase, while access to basic goods and services has become a challenge in some parts of the country due to dysfunctional markets. Household purchasing power is decreasing due to disrupted livelihoods.[14] The country faced an economic contraction of 5.4% in the 2020/2021 financial year due to floods in 2021 that hampered oil and agricultural production.[15]

To support markets and address these needs, humanitarian partners implement Cash and Voucher Assistance (CVA) to assist vulnerable households. For the efficiency of CVA, information about the capacity of local markets is crucial as well as proper functioning of supply chains to provide basic commodities continuously.[16] Disruptions to the supply chains may affect the availability of essential goods, as well as commodity prices and thus negatively impact households' ability to access basic food and non-food items (NFIs) to support their livelihoods. It is therefore critical for the humanitarian community to widen the evidence base in regards to these prerequisites and to develop a deeper understanding of the complex market dynamics in South Sudan.

South Sudan Joint Market Monitoring Initiative

In an effort to bridge market information gaps, the South Sudan Joint Market Monitoring Initiative (JMMI) was put in place. The JMMI is a price monitoring exercise initiated by the Inter-Agency Cash Working Group (IACWG) in August 2019. The initiative was previously funded by the World Food Programme (WFP) and currently funded by USAID through the Complimentary Action for Resilience Building (CARB) Consortium, guided by the JMMI Technical Working Group (JMMI-TWG), led by REACH and supported by the IACWG members. The JMMI data on key commodities and marketplaces is collected jointly by field teams of humanitarian actors implementing CVA (agencies participating in JMMI data collection are listed in Annex I). In each location, field teams record prices and availability of basic food items and NFIs. The JMMI is constructed around the commodities and services included in the MSSMEB calculating costs over time and tracking changes in key indicators on market functionality. Factsheets and datasets with this information are disseminated on a monthly basis. During the period under study (August 2019 – December 2022), REACH published 41 JMMI factsheets. Statistics and detailed information about JMMI findings are visualized in the JMMI dashboard. [17][18]

[12] South Sudan Humanitarian Needs Overview - November 2022
[13] Worldbank overview, April 2021
[14] FEWSNET: Food Security Outlook - October 2022
[15] World Bank South Sudan Economic Monitor - February 2022
[16] Cash Working Group Strategy Paper for South Sudan - 2019 - 2020
[17] JMMI Dashboard
[18] REACH ressources centre , JMMI outputs, 2019-2022

3. BACKGROUND

Key events, macroeconomic developments and shocks affecting South Sudan

Economic shocks

Economic shocks in South Sudan, such as a reduction in global oil prices, the effects of flooding on supply chains, high inflation and depreciation of the currency have led to market disruptions, abrupt price rises and a deterioration of the humanitarian situation.[19] These shocks have worsened the already dire food security situation further fuelled by endemic violence, climatic shocks and population displacement each of which disrupts cultivation including in areas with traditionally good harvests such as Western Equatoria.

Impacts of COVID-19 (2020-2022)

South Sudan is no exception when it comes to the disruptive impact of the COVID-19 pandemic on the country's economy. Many businesses cited slowdowns due to the pandemic's impact.[20] The COVID-19 pandemic influenced the global economic outlook as a whole and impacted the economy of South Sudan in multiple ways. As a consequence of the global economic slow-down and its impact on global transport, oil prices plunged in the end of quarter 1 in 2020. Oil is substantial for South Sudan's economy with 97% of the country's exports being oil-related.[21]

Simultaneously, border crossing closures were established, which disrupted supply chains. Neighbouring countries traditionally exporting cereals to South Sudan, such as Uganda, established measures restricting cereal exports to reinforce their national reserve stocks.[22] In March 2020, South Sudan introduced restriction measures to curb the spread of COVID-19 which reportedly resulted in a notable increase in commodity prices. Firstly, on 19 March 2020, the suspension of social, political, religious and sport gatherings for 6 weeks was announced, and classes in all schools were suspended for a month. A night-time curfew was put in place on 25 March.[23] This was supplemented by 14 days of lockdown in northern Upper Nile State in early April.[24] In mid-April 2020, public transportation and flights between the states were suspended. In the end of April 2020, restaurants were limited to takeaways and passenger usage of boda-bodas (motorbikes) was forbidden.

The partial lockdown was extended until January 2022 to curb the spread of the virus.[25] Quarantine measures remained in place at the border crossings (entering the Democratic Republic of Congo, Uganda and major border crossings to Sudan)[26] which prolonged the time taken to restock and increased the cost of commodities. In Uganda, strict testing requirements were imposed on truck drivers crossing the border from South Sudan, which hampered South Sudan's imports from Uganda. In October 2022, the National COVID-19 Taskforce lifted COVID-19 restrictions and published guidelines for travellers moving in and out of the country.[27]

[19] WFP South Sudan Situation Report - July 2022
[20] South Sudan Labour Market Analysis - 2020
[21] IMF Country Focus - Impact of COVID-19 in South Sudan
[22] FAO, COVID-19 Impact on Markets & Trade, April 2020
[23] South Sudan imposes nighttime curfew over coronavirus, by Radio Tamazuj, March 2020
[24] Northern Upper Nile under lockdown after citizens escaped from quarantine, by Radio Tamazuj, March 2020
[25] COVID-19: South Sudan reviews curfew as cases rise to 34, by Radio Tamazuj, April 2020
[26] DTM South Sudan, September 2021
[27] "South Sudan's lifts COVID-19 restriction", Radio Tamazuj, October 2022

Population displacement trends and the impacts of flooding

The two major push factors of the displacements are conflict and flooding.[28] Major displacements occurred in 2020-2021 in Warrap and Jonglei states as a result of sub-national conflicts and inter-community violence.[29] In October 2022, over 1 million people were affected by torrential rain and flooding in 36 counties across South Sudan and over 20,000 people in the Southern part of Abyei Administrative Area. The areas affected by the flooding include Jonglei, Lakes, Northern Bahr el Ghazal, Western Bahr el Ghazal, Unity, Upper Nile, Warrap and Western Equatoria states. Eastern Equatoria and Western Equatoria states that were unaffected by the 2021 floods were affected by the floods in 2022.[30] In Lakes State in 2019, micro-displacements and cross-county displacement due to floodings took place, resulting in pockets of emergency food security Phase 5 as per the Integrated Food Security Phase Classification (IPC) in Cueibet and Rumbek North counties.[31]

Displaced populations in South Sudan commonly depart from locations with non-functioning markets carrying very few assets. They lose access to production assets such as land and the possibility to cultivate, which diminishes the overall production level. Marketplaces to which internally displaced persons (IDPs) arrive are affected by an increase in demand for cheap goods. This, on one hand, opens a window of opportunity for traders; however, restocking can be restrained by infrastructural deficits, financial constraints and security concerns. In parallel, the IDPs affect the labour markets in the locations where they arrive by increasing the supply of casual labour. As a result, the demand for cheap goods and the saturation of cheap labour in the market negatively affect the purchasing power of the host communities who struggle with high commodity prices and limited labour opportunities.

Economic effects of the Ukraine War

The start of the war in Ukraine posed a threat to the economies of many developing countries. South Sudan is not overly exposed to Russia or Ukraine; it has felt the secondary effects of the war, particularly in the prices of goods imported from neighbouring regional markets like Uganda and Kenya, which are more reliant on Ukrainian exports. Between 2012 and 2019, imports from Uganda accounted for 48% of total imports (253 million USD) while imports from Kenya represent 30%. Additionally, the war is having a negative impact on global food and fuel prices.[32] Since the beginning of the Ukraine crisis, there has been an increase in the food basket cost across all monitored markets, as South Sudan relies heavily on international trade for some key items of the food basket.[33]

Economic stabilisation

The IMF has three times decided to disburse grants to South Sudan. The first two loans, in amounts of 52 and 174.2 million USD, were granted on 11 November 2020 and 30 March 2021 respectively under the IMF's Rapid Credit Facility, which aimed at satisfying urgent needs and encompassed capacity development on fiscal statistics and policy advice. The third one, amounting to 334 million USD, was disbursed under Special Drawing Rights on 2 August 2021 and was meant to sustain exchange rates and build foreign exchange reserves.[34]

In exchange, the IMF pushed for structural economic reforms such as a diversification of the economy, strengthening human development, transparency, infrastructure and institutions. From the fiscal side, a plan for debt sustainability and economic growth was being charted. Measures to revitalize

[28] FSIN: Global report on food crisis - 2022
[29] REACH, Tonj South & East Rapid Assessment, September 2021
[30] OCHA, South Sudan Flooding Situation Report, October 2022
[31] Heart-breaking flood situation in Jonglei state South-Sudan, by saferworld, December 2020
[32] UNDP: Potential Impact of war in Ukraine on South Sudan Economy - April 2022
[33] WFP South Sudan Situation Report - September 2022
[34] "South Sudan receives USD 334 Million from IMF", Radio Tamazuj, August 2021

government revenues were taken, including phasing out of tax exemptions and unifying the official and parallel market exchange rate.[35] In the first quarter of 2022, the World Bank approved a 120 million USD International Development Association grant financing for South Sudan with the aim of improving access to basic infrastructure and to strengthen the resilience of community institutions.[36]

Inflation and fluctuating exchange rates

In 2019, The BoSS had kept the official exchange rate fixed despite a sharp decline in the foreign currency reserves. The gap between the official and so-called parallel-market rates was widening due to the impacts of civil war, decline in oil prices and the subsequent depreciation of the SSP.[37] The South Sudanese pound depreciated by 32 percent in 2019 on the parallel market and the spread between official and parallel-market exchange rates further widened, increasing from about 60 percent in late 2018 to almost 100 percent in late 2019.

In addition, the economic outlook was further aggravated by the impacts of COVID-19. Oil prices plummeted globally, causing government revenues to drop, but expenses did not decrease proportionally. On the contrary, expansionary policies were applied in an effort to boost the economy. South Sudan sustained its finances by borrowing, which led to "high risk of debt distress",[38] and by increasing the supply of hard currency in circulation. This fuelled inflation and contributed to depreciation, which was around 30% in 2020, according to World Bank data.[39] The lack of foreign reserves made it difficult for the central bank to close the gap as well as to intervene against inflation.[40]

The monetary financing of budget deficits was halted in October 2020 as a part of the planned reforms.[41] Another reform was launched in the second quarter of 2021 aimed at uniting the parallel-market and official exchange rates. Banks and exchange bureaus were required to start trading immediately with the market-clearing exchange rate that was published daily. The desired outcome was contributing to economic stabilisation by releasing the fixed exchange rate and unifying the official and parallel exchange rates. It is argued that the successful conversion was achieved via a decline in the purchasing power of consumers in South Sudan leading to lower demand for imported goods, which translated to diminished demand for foreign currencies.

[35] IMF Executive Board Approves USD 174.2 Million Emergency Assistance for South Sudan to Address the COVID-19 Pandemic, March 2021
[36] World Bank Grant for South Sudan - 2022
[37] UNDP, WFP Policy brief: Analysis of the Implications of Foreign Exchange Reforms on Food Prices in South Sudan, September 2021
[38] IMF eLIBRARY, Republic of South Sudan: Staff-monitored Program and Request for Disbursement Under the Rapid Credit—debt Sustainability Analysis, April 2021
[39] Worldbank, World Development Indicators, November 2021
[40] South Sudan's forex shortage highlights broader economic crisis, David Mono Danga, September 2020
[41] IMF Executive Board Approves USD 174.2 Million Emergency Assistance for South Sudan to Address the COVID-19 Pandemic, March 2021

4. METHODOLOGY

Data collection for this analytical report was drawn from the JMMI, which has produced monthly market data covering all ten states of South Sudan since August 2019. The JMMI is a joint exercise led by REACH in close collaboration with the IACWG and its members, who collect data in their respective field bases on a voluntary basis. As such, the scope and coverage of the JMMI largely depend on the interest and capacity of the IACWG members to participate. Over time, coverage has been continually expanding in line with the increasing number of participating partner organizations. Standardised procedures and tools have been developed for data collection in order to make the exercise consistent and reproducible.

The data is collected in the first week of every month by conducting Key Informant (KI) interviews with vendors in assessed marketplaces. The data is collected via the Kobo Collect/Open Data Kit (ODK) Android application which enables enumerators to record surveys offline and upload them once internet connection is available. The questionnaire is translated into local languages and is made available to the enumerators, so that a difference in translation does not distort the survey questions. A single version of the survey covers all types of shops and vendors, such as wholesalers and retailers. Information is collected on:

- Prices of basic goods and services
- Functionality of road and river routes and constraints on their use
- Restocking possibilities and accepted modalities of payment

All the data from a marketplace needs to be collected on the same day for efficiency and consistency purposes, and a single partner contributes to data collection in each round. All enumerators are expected to be familiar with the local market conditions and are trained on the methodology and tools prior to data collection.

At least four price quotations per marketplace need to be collected from different traders for each food, non-food, and livestock item in order to ensure the quality and consistency of the data, along with two quotations for currency exchange and milling costs. In line with the purpose of the JMMI and the MSSMEB itself, only the prices of the cheapest available types are recorded for each item.

Each enumerator identifies the individual traders at the marketplace based on the following criteria:

Retailer criteria:

1. Traders are retailers selling directly to consumers.
2. Traders with weight scales are prioritized when recording prices of dry food items.
3. Traders need to offer prices representative of the local price level.
4. Traders selling upmarket goods and expensive brands should be avoided.
5. To the extent possible, the same traders are revisited in every data collection round.

Wholesaler criteria:

1. Traders need to be wholesalers selling food items to other traders in bulk.
2. Traders selling upmarket goods and expensive brands should be avoided.
3. Traders need to sell in large quantities (in 50/100 kg bulk packages).
4. To the extent possible, the same traders are revisited in every data collection round.

Following data collection, the data is compiled, cleaned, analysed and disseminated. The dataset and the analysis are reviewed repeatedly in order to ensure quality and consistency. The data collection tools have been published alongside the dataset every month and disseminated to the IACWG and the humanitarian community. All monthly data since the inception of the JMMI exercise can be accessed in the JMMI dashboard.[42]

Contextualising markets in South Sudan

Markets, as defined by the CALP Network, constitute a system of exchanges between two or more actors or players with the subject of exchange being goods, services, or money. Often, there are market days when most traders gather in selected areas at particular times, making the possibilities of trading predictable and hence more convenient.

For the purposes of this analysis, two types of locations are distinguished:

- Small locations are those locations with only one marketplace serving the entire village, or multiple small marketplaces each providing a different set of items.
- Large locations are those locations with multiple large marketplaces, in which specific marketplaces are designated for the data collection with focus on the main marketplaces commonly known to the local population and field teams.

The tables below illustrates the expansion of JMMI market coverage per state from August 2019 to December 2022.

Figure 1: Number of marketplaces covered per state, between 2019 - 2022

	2019			2020			2021			2022		
State	**Aug**	**Oct**	**Dec**	**Jan**	**Aug**	**Dec**	**Jan**	**Aug**	**Dec**	**Jan**	**Aug**	**Dec**
Central Equatoria	1	1	1	1	2	2	1	7	4	5	3	3
Eastern Equatoria	0	2	3	2	5	6	5	3	3	4	3	4
Jonglei	5	6	7	4	6	3	3	4	7	3	4	7
Lakes	2	1	5	2	2	2	2	3	4	7	7	6
Northern Bahr El-Ghazal	1	1	4	7	0	5	5	8	9	8	8	9
Unity	2	5	6	8	6	6	6	8	5	4	6	6
Upper Nile	1	5	6	3	4	12	8	4	4	1	6	8
Warrap	0	0	0	0	0	0	0	5	6	9	6	7
Western Bahr El-Ghazal	1	1	1	2	1	3	0	2	3	2	2	1
Western Equatoria	1	2	2	1	2	1	1	3	2	4	7	7
Total	**14**	**19**	**34**	**31**	**39**	**40**	**31**	**47**	**47**	**47**	**52**	**58**

[42] JMMI Dashboard

Contents of the Multi-Sector Survival Minimum Expenditure Basket (MSSMEB)

The cost of the MSSMEB is calculated by multiplying the median price of each item in the respective location by the quantity required for the MSSMEB (see figure 2 below). As sorghum grain is the most commonly grown and consumed cereal, its price is usually used in the calculation of the cereal component of the MSSMEB; however, in areas where maize grain is more commonly consumed, the price of maize is used instead. In areas where both cereals are consumed equally, the price of the cheaper item is used. Bean prices are used for calculating the pulses component of the MSSMEB. Rather than the price of vegetable oil, the price of the cheapest locally available cooking oil is used. If a component of the MSSMEB is unavailable in a location, the national median price for that component is used for the calculation of the index.

Figure 2: MSSMEB contents

Food Items			
Cereals (sorghum for GUN and GBeG; maize for GE)	90 kg		
Pulses (beans)	9 kg		
Vegetable oil	6 L		
Salt	1 kg		
Non-Food Items (monthly)			
Charcoal	50 kg	School fee	3 USD
Milling cost	30 kg	Exercise book	12 pcs
Bar soap	30 kg	Pencil	6 pcs
Bleach	1.5 L	Pen	6 pcs
Medicine	10 USD	Rubber	3 pcs
Airtime	30 min	Sharpener	3 pcs
Transport	3 USD		
Non-Food Items (one-off)			
Blanket	2 pcs	Sanitary pad	4 pcs
Mosquito net	2 pcs	Underwear	4 pcs
Kitchen set	1 pc	Kanga	2 pcs
Jerrycan	2 pcs		

JMMI data analysis

Multi-Sector Survival Minimum Expenditure Basket

The MSSMEB employed in this analysis represents the minimum culturally adjusted group of items and services that a household needs to meet their acute needs. The MSSMEB is based on the assumption that the price of the basket enables an average household to sustain themselves for one month. One household for the purpose of the MSSMEB is considered to have six people, which is the average size of a South Sudanese household.

The harmonisation of the MSSMEB and monitoring the evolution of its cost over time contributes to setting the right transfer value for CVA programming. The cost of the MSSMEB can be used as a proxy for the financial burdens facing households in different locations. The contents of the MSSMEB were defined and determined by the IACWG in cooperation with all the relevant clusters and sector leads.[43] The sectoral needs covered in the MSSMEB are food security, nutrition, hygiene, shelter, education and health. All the contents of the MSSMEB are specified in figure 2 above, with certain items representing one-off costs such as blankets, mosquito nets, kitchen sets, jerrycans, sanitary pads, kangas and plastic buckets, in contrast to consumable items that must be repurchased every month. The cost of the MSSMEB is calculated by multiplying the median price of each item in the respective location by the quantity required for the MSSMEB (see figure 2 above). The cost of the food component of the MSSMEB is separately calculated and its trends analysed using the same method.

Food Price Index

The FPI is calculated in each location by adding up the median prices of one unit of each monitored food item. As opposed to the MSSMEB, the food price index is less driven by staple cereal prices and more balanced across different food items. If an item is not available in a location, the country-wide median is used for the calculation of the index.

Median-of-medians

For the calculation of individual commodity prices at the level of the location, the median of quotations for that commodity in that marketplace is used. These marketplace-level median prices are thereafter used for all subsequent calculations including calculations of the MSSMEB, the MSSMEB food component and the FPI. To aggregate commodity prices or index costs to the level of the state, region or country, the median of all location-level median commodity prices falling within that geographic area (the 'median-of-medians') is used. The median was chosen over other statistical calculations for its robustness, meaning that high outliers, which are common in monetary data sets, are less likely to skew the overall outcomes.

United States Dollar conversion

All SSP amounts are converted to USD using local parallel-market exchange rates. The parallel-market exchange rates (buy and sell rate) are collected from two traders in each assessed location and the resulting countrywide rate is the median-of-medians of these.

[43] Cash Working Group South Sudan: Survival Minimum Expenditure Basket Guide - 2018

Market Functionality Score (MFS)

The MFS is a categorical indicator for determining whether a given market is functional or not functional and whether there may be any hindrances in the foreseeable future. This indicator is assessed for each location separately with the following potential levels to be attained:

3 – Fully functional – (1) many items are available and (2) prices are normal or low compared to other assessed locations

2 – Limited functionality – either (1) many items are unavailable or (2) prices are relatively high compared to other assessed locations

1 – Poor functionality – either (1) only a few items are available or (2) prices are very high compared to other assessed locations or (3) staple cereals are unavailable

0 – Severe issues – no basic food or non-food items are currently available

This indicator is a combination of more granular variables assessing the availability of staple cereals (sorghum and maize), number of basic food items available, number of basic non-food items available, number of food items available from a wider list of 11 food items, number of non-food items available from a wider list of 20 NFIs, and the FPI and MSSMEB price levels relative to the overall country median.

The second part of the indicator is a "Warning" component assessing the likelihood of emergence of severe functionality challenges in the markets. This warning mechanism is based on the current ability of traders to restock staple cereals (sorghum and maize) and current stock levels of these. These staple cereals (sorghum and maize) are essential for the South Sudanese diet and therefore, a marketplace cannot be considered fully functional when these are not available.

Challenges and limitations

One of the main challenges of analysing and interpreting JMMI data is the coverage and the non-representativeness of purposive sampling which is linked to it. Unfortunately, a representative sample is not currently feasible due to limited capacity of partners and due to issues with access. Convenience sampling enables widening the number of sampled locations; however, it also leads to underrepresentation of rural and other areas which are hard to access for enumerators and traders.

The data is mostly collected from main marketplaces which provide information for the urban areas and their catchment areas. Unfortunately, locations in which the data collection is interrupted or ceases completely are not random which creates another systematic distortion. The data collection is often affected when Non-Governmental Organisation (NGO) activities are suspended in locations due to shocks endogenous to market functionality such as security risks, conflict, or flooding. Therefore, the locations where data is temporarily not collected are certain to affect the results. Due to the missing data in such marketplaces, the situation presented based on the collected data probably provides a more optimistic outlook on the situation of markets in South Sudan compared to the reality.

Another risk is that locations where NGOs are present and therefore able to collect data exhibit underlying similarities linked to NGOs' presence, either as its cause or a consequence. Dependence on partner availability for data collection can also lead to a decrease in data collection in the busiest periods of the year as the opportunity cost of performing the data collection increases. Finally, as the JMMI continues to expand and is extended to additional locations, the reported changes in the overall median prices may be driven by shifts in coverage rather than actual price changes.

The price data is only indicative for the time frame within which it was collected – generally the first week of the month. The prices in the rest of the month may differ from those in time of data collection. The data that is collected may vary slightly due to timing of the data collection within the devoted time frame of seven days. Enumerators are encouraged to collect data in the beginning of this window to minimize the differences.

Products used for the price comparisons may vary slightly across regions as the JMMI data collection tool requests the cheapest available type of each item to be recorded. Moreover, availability varies across regions.

Lastly, potential errors in the units of measurement decrease the accuracy of the data. Standardizing unit sizes of dry food items is inherently difficult in South Sudan, as many traders sell commodities by volume rather than weight. As result, not all the traders use scales and often use their own volume measures. As a remedy a standardized unit of volume was established (JMMI mugs) and distributed among the enumerators. JMMI mugs are mugs of standardized size which vendors fill in to give a price for this specific volume of given commodity. This enables recalculation to other standard units.

5. FINDINGS

Exchange rates and monetary reforms

In South Sudan, four different types of exchange rate for the SSP existed prior to the monetary reform in April 2021:

- *Official rate:* Exchange rate set by the Bank of South Sudan (BoSS) at which SSP are traded by government agencies and official institutions.
- *Indicative/reference rate:* Indicative market-clearing exchange rate published by BoSS daily based on the rates at which commercial banks traded foreign exchange the previous day.
- *Auction rate:* Market rate determined by auctions of USD by the BoSS.
- *Parallel rate:* Market rate at which SSP are traded.

The BoSS had kept the official exchange rate fixed despite a sharp decline in the foreign currency reserves. The gap between the official and so-called parallel-market rates was widening due to the impacts of civil war, decline in oil prices and the subsequent depreciation of the SSP.[44]

In addition, the economic outlook was further aggravated by the impacts of COVID-19. Oil prices plummeted globally, causing government revenues to drop, but expenses did not decrease proportionally. On the contrary, expansionary policies were applied in an effort to boost the economy. South Sudan sustained its finances by borrowing, which led to "high risk of debt distress",[45] and by increasing the supply of hard currency in circulation. This fuelled inflation and contributed to depreciation, which was around 30% in 2020, according to World Bank data.[46] The lack of foreign reserves made it difficult for the central bank to close the gap as well as to intervene against inflation.[47]

The monetary financing of budget deficits was halted in October 2020 as a part of the planned reforms.[48] This step also served as a signal of commitment from the South Sudanese government to implement reforms. Consequently, South Sudan secured two loans from IMF under the Rapid Credit Facility in November 2020 and March 2021 for combined financing of 225 million USD (47 million USD and 174.2 million USD respectively).[49] These provided financial space for the government to start introducing reforms in multiple domains, both fiscal and monetary. Firstly, financing of budgetary expenditures through inflation were to be abolished. The inflation target for 2021 was set at 10%, which would be a substantial decrease from 29.68%, at which inflation was recorded in 2020, as compared to 2019 where it was at 87.24%.[50] The BoSS expressed its intention to transit to interest-

[44] UNDP, WFP Policy brief: Analysis of the Implications of Foreign Exchange Reforms on Food Prices in South Sudan, September 2021
[45] IMF eLIBRARY, Republic of South Sudan: Staff-monitored Program and Request for Disbursement Under the Rapid Credit—debt Sustainability Analysis, April 2021
[46] Worldbank, World Development Indicators, November 2021
[47] South Sudan's forex shortage highlights broader economic crisis, David Mono Danga, September 2020
[48] IMF Executive Board Approves USD 174.2 Million Emergency Assistance for South Sudan to Address the COVID-19 Pandemic, March 2021
[49] South Sudan economy gets boost from IMF, says central bank governor, by Reuters, August 2021
[50] Worldbank, World Development Indicators, November 2021

based monetary policy in the medium to long term and in expanding the employed monetary instruments, among others, to bills and term deposits issued by BoSS.[51]

Another reform was launched in the second quarter of 2021 aimed at uniting the parallel-market and official exchange rates. Commercial banks were allowed to participate in weekly auctions of US dollars, which were increased in the end of May 2021.[52] Banks and exchange bureaus were required to start trading immediately with the market-clearing exchange rate that was published daily. The desired outcome was contributing to economic stabilisation by releasing the fixed exchange rate and unifying the official and parallel exchange rates, trading at the market value.[53] The Bank of South Sudan stopped using the official exchange rate on 4 August 2021 and transited to the unrestricted exchange rate.[54]

It is argued that the successful conversion was achieved via a decline in the purchasing power of consumers in South Sudan leading to lower demand for imported goods, which translated to diminished demand for foreign currencies.[55]

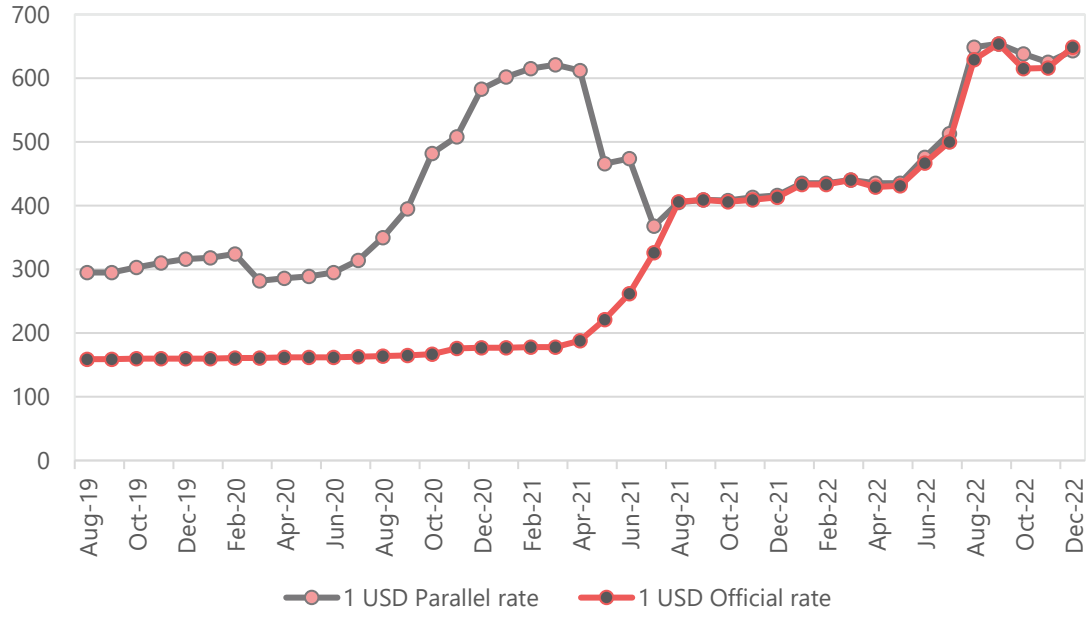
In August 2021, the IMF had additionally loaned 334 million USD to South Sudan under its general allocation of Special Drawing Rights following the unification of exchange rates. The grant was allocated to support the progression of monetary reforms and increasing the pace of economic recovery from the impacts of COVID-19 on oil prices, as well as providing the opportunity to tackle salary arrears.[56] In November 2021, IMF conducted an in-depth analysis of South Sudan's economy (the First Review of the Staff-Monitored Program) in which they expressed the needs for further reforms, including strengthening public financial management and effective / accountable tracking of public funds.[57] In 2022, the governor of the Central Bank of South Sudan announced new monetary and banking policies to revamp the economy. The policies were aimed to reduce inflation and to fix exchange rates between the US dollar and SSP, which remained largely unstable.[58]

Since the beginning of JMMI data collection in August 2019, the exchange rate encountered sharp fluctuation as shown in figure 3 below. In December 2022, 1 USD was exchanged at a parallel rate of 643 SSP as compared to the JMMI August 2019 baseline value of 295 SSP, an increase of 118%. Between August 2019 to June 2021 the gap between the official and parallel-market rates was continually increasing, which drove prices of commodities upwards.

The highest difference between the official and parallel-market rates was recorded from the months of January to April 2021, the highest being March 2021 when a difference of 443 SSP was recorded, equivalent to a parallel-market rate 249% higher than the official rate. Since then, the gap has progressively decreased with the unification of exchange rates, supported by IMF.

[51] Bank of South Sudan - Directorate of Supervision, Research and Statistics, Monetary and Exchange Rate Reforms, March 2021
[52] South Sudan Injects Dollars Into Market to Close Currency Gap, by Bloomberg, May 2021
[53] Reuters, South Sudan's central bank orders banks to use one foreign exchange rate, April 2021
[54] Central bank stops use of official bank rate, by Jale Richard, August 2021
[55] UNDP, WFP Policy brief: Analysis of the Implications of Foreign Exchange Reforms on Food Prices in South Sudan, September 2021
[56] South Sudan gets USD 334 million from IMF, African Law & Business, September 2021
[57] IMF, IMF Management Approves the Completion of the First Review of the Staff-Monitored Program with the Republic of South Sudan, November 2021
[58] South Sudan Central Bank Fiscal Policies - 2022

Figure 3: Exchange rate trend, August 2019–December 2022



The exchange rate of SSP against the Sudanese pound (SDG) and the Ethiopian birr (ETB) had very different trajectories compared to the USD. The SDG recorded its highest exchange rate against the SSP in the month of August 2022, when 1 SDG was exchanged at 9.66 SSP as compared to the baseline value of August 2019, 4.83 SSP. Following the coup in Sudan, in October 2021, Sudan has been facing shortages in basic goods, new taxes as well as steep prices increased on fuel, electricity and food leading to significant inflation.[59]The Ethiopian birr (ETB), meanwhile, recorded its highest exchange rate against the SSP in the month of May 2022: 37.50 SSP/ETB, as compared to the JMMI baseline value of September 2019, which was 7.50 SSP. Since the beginning of the conflict in the northern region of Tigray, in November 2020, increased violences have severely disrupted livelihoods, affecting the availability of staple market commodities, and leading to signficant inflation.

Fluctuations in exchange rates and their impacts on prices of commodities complicate the implementation of long term projects, which may have to undergo substantial changes, the success of which would depend on all actors being well informed. This is where monthly monitoring of prices becomes essential, enabling actors to be more flexible and make swift changes based on nearly real-time data.

[59] Eyewitness, 2022

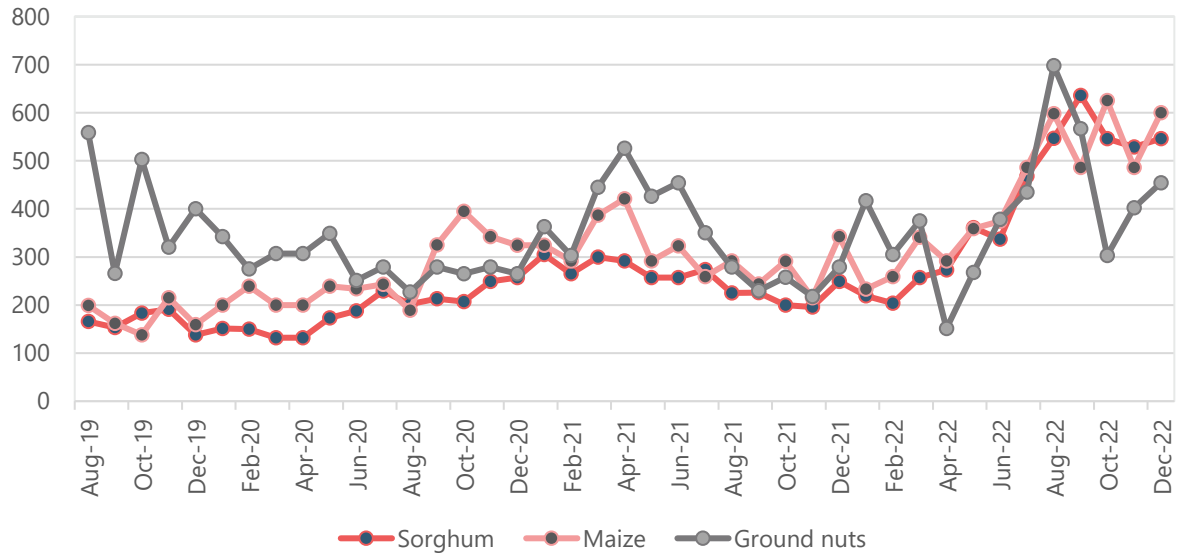
Market price trend analysis

Landlocked South Sudan relies on food and non-food items imported mainly from neighbouring countries, such as Uganda, Kenya, Sudan and Ethiopia. Despite reduced cereal deficits in 2022, there was still a substantial cereal deficit in South Sudan (485,400 tonnes – 10% less than in 2021), due to reduced imports from Uganda where exportable surpluses shrunk in 2022 following reduced cereal production.[60] Key drivers of price changes include the volatile macro-economic situation, limited domestic production and supplies, insecurity along the supply routes, high transportation cost, high fuel prices and poor road conditions, all of which led to dramatic price rises of commodities and services since 2021.[61]

Median food prices

The vast majority of food item prices experienced significant increases between 2019 and 2022. For the food items, prices started to skyrocket from May 2020 onwards, with the highest median prices recorded from August to December 2022. For example, the median price of sorghum showed a generally rising price trend from February to December 2022, reaching a peak of 636 SSP per kilogram in September 2022 as compared to the August 2019 baseline value of 166 SSP, indicating a price increase of 283%.

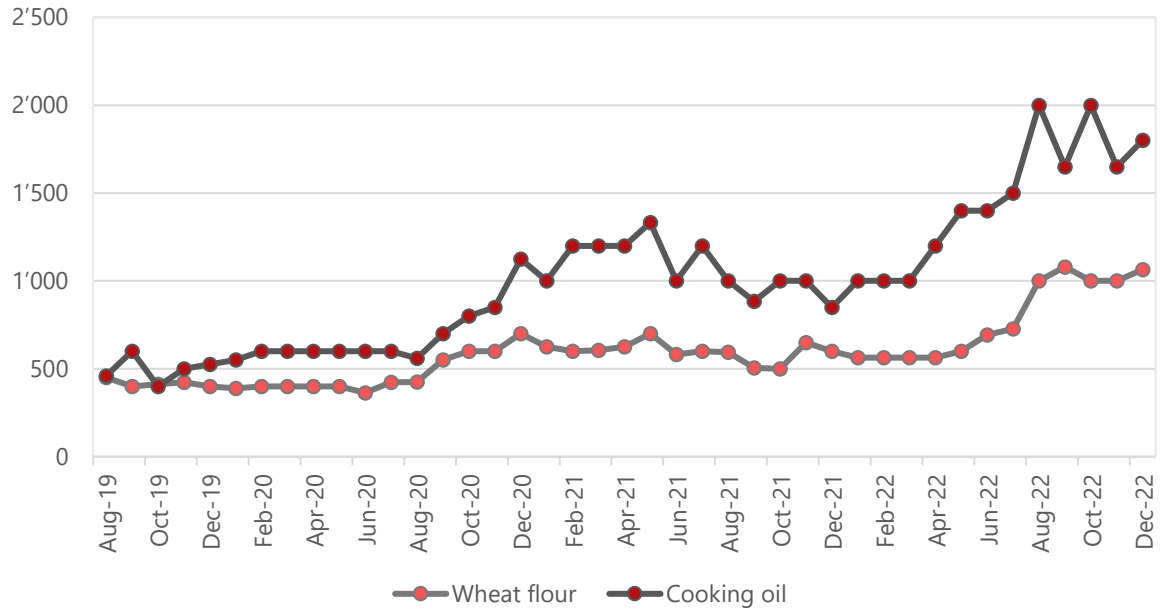
Figure 4: Median local food price trends, August 2019–December 2022



[60] FAO: South Sudan Country Brief: March 2023

[61] FSIN: Global report on food crisis - 2022

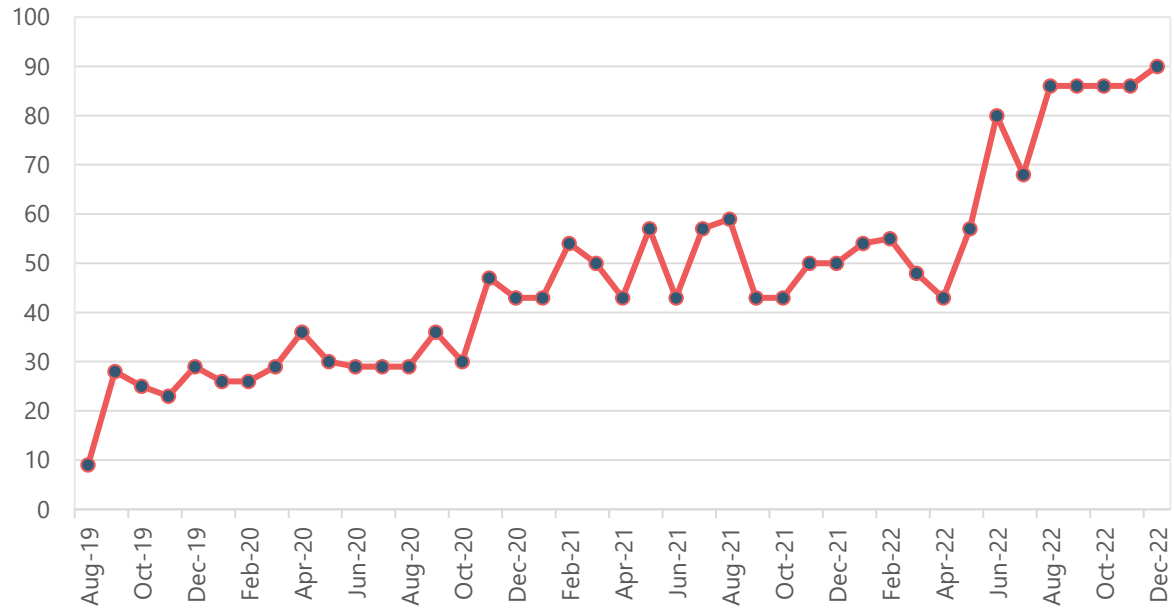
Figure 5: Median imported food price trends, August 2019–December 2022



Milling cost trends

Food-related services such as milling were not spared by rapidly increasing inflation in the energy sector. Since milling machines largely depend on fuel, the high fuel prices negatively affected the milling cost. In December 2022, the median milling cost reached 90 SSP per kilo, as compared to August 2019 when the price was at 9 SSP, showing a 900% increase. In 2022, the lowest milling cost recorded was 43 SSP per kilogram in the month of April. As in many countries in East Africa, milling service costs have a significant impact on the final price that customers will pay for cereals and other grains.

Figure 6: Over time milling cost trends, August 2019–December 2022



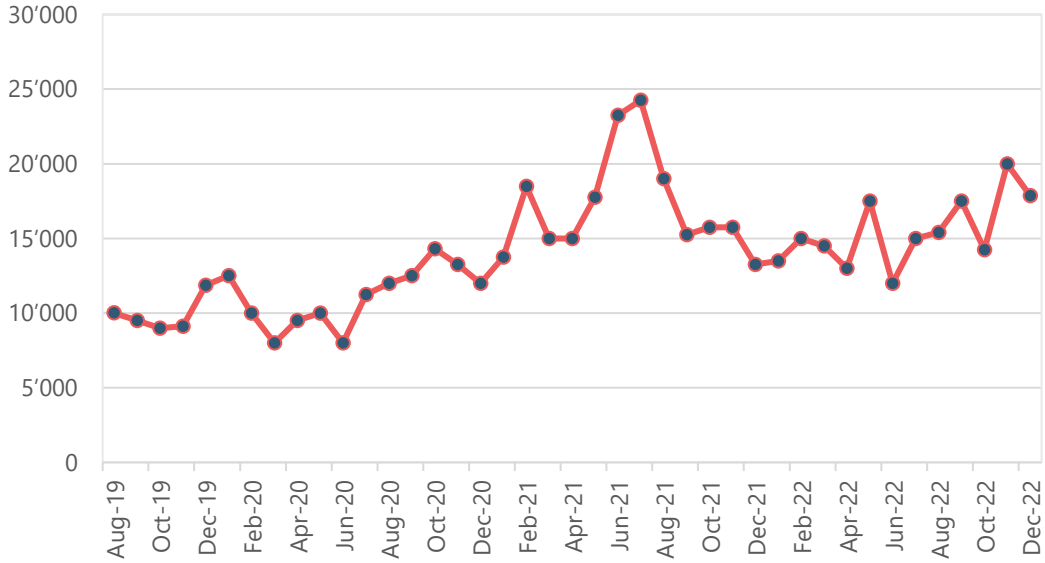
Livestock price trends

Between 2014 and 2017, the civil war caused a disruption in the means of livelihoods, including arable farming. Due to the conflict, many households lost their herds, resulting in an increase in cattle raiding. This vicious cycle has negatively affected household food security and reduced livestock production. The collapse of national food production and remote herding of livestock away from homesteads resulted in famine in some areas during this time. As a result, people have increasingly collected wild rangeland products and received food assistance in place of milk. Although livestock-cereal exchanges have returned to near-normal and people are now able to engage in arable cropping, diets remain less diverse than before the civil war.

A 2019 study[62] confirms that agro-pastoralists and pastoralists routinely exchange livestock for cereals with their agrarian neighbors, especially during the dry season or times of crisis, to "trade up" calories. As the cash economy penetrated South Sudan, sales replaced bartering in the country's network of livestock markets, with annual sales now valued in millions of US dollars. Livestock keepers are aware that selling more animals could potentially threaten herd growth and ultimately impact their staple food source. The study also confirms that the Civil War and associated cattle raiding, high inflation, and poor terms of trade have led to important loss of livestock from family herds. Looted and distressed assets have resulted in millions of dollars' worth of livestock being sold out of the country. At times, insecurity has brought livestock marketing to a standstill, and due to poor roads, conflict, and flooding, livestock market integration in South Sudan remains challenging.[63]

From August 2019 to December 2022, prices of livestock continued to be volatile, due to several barriers such as flooding, livestock disease and cattle raiding. The highest median price per live goat was 24,250 SSP in July 2021, a 143% price increase compared to the baseline value in August 2019 of 10,000 SSP per goat. However, a significant decrease of price was observed after July 2021. Several contextual factors such as large-scale floods in 2021 and the increased use of negative coping mechanisms like selling livestock at lower costs could potentially explain this evolution.

Figure 7: Goat price trends, August 2019–December 2022



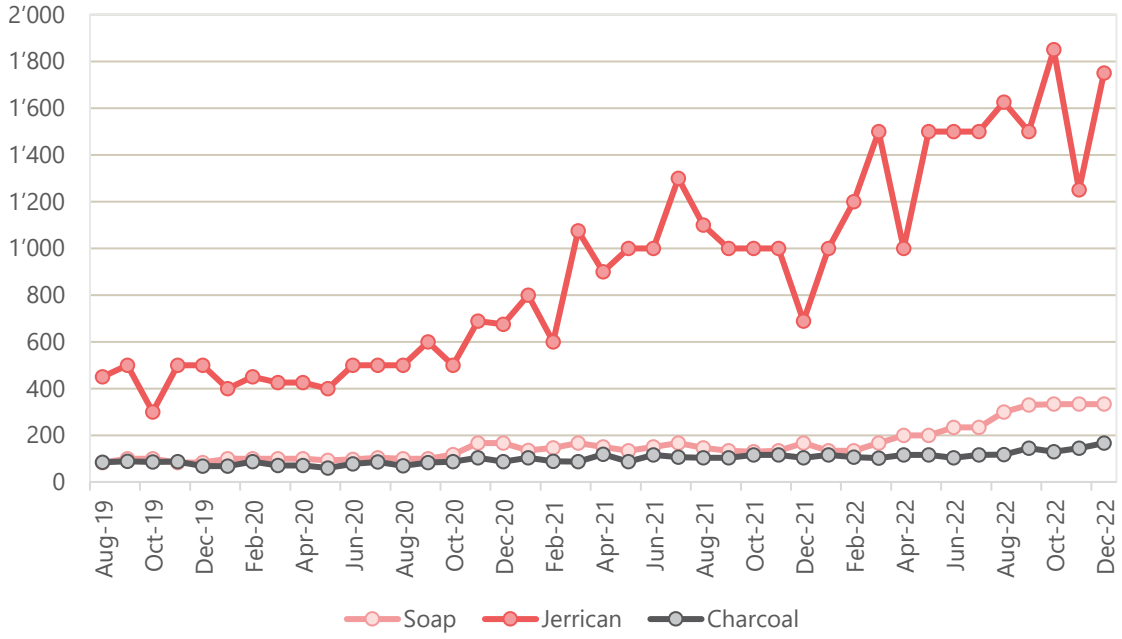
[62] A. Cullis, O. Jepsen, D. Kweji and G. Muchunu. Understanding the livestock economy of South Sudan Study. Link
[63] Ibid.

NFI median price trends

As previously noted, the importation of certain items, such as jerrycans, is heavily reliant on international supply chains, particularly those involving Sudan, Ethiopia, and Uganda. Various factors, including global events like COVID-19, access barriers, and cross-border insecurity, have led to price fluctuations for these imported goods, while domestically produced items like soap have maintained stable pricing for several years. However, it is worth noting that certain NFI and food items, despite being domestically produced, have been sold at higher prices in South Sudan's markets since June 2022.

Soap prices have increased over time. The highest median prices were recorded from the months of October to December 2022: 333 SSP per 200-gram bar of soap as compared to 83 SSP recorded in August 2019, a figure showing a 301% price increase from the baseline value. For mosquito nets, median prices in the last quarter of 2022 hit 3,000 SSP per piece, as compared to August 2019 when the price was 1,250 SSP, a 140% price increase.

Figure 8: Over time median NFI price trend, August 2019–December 2022



Price volatility trends at individual marketplaces

Price volatility is evident in all South Sudanese marketplaces. This study took a sample of marketplaces with relatively consistent JMMI data to provide a snapshot of price volatility encountered in various marketplaces. The selected marketplaces for this study are Juba, Bor, Yirol and Renk.

Figure 9 : Over time median price for four key items in Yirol, Renk, Bor, Juba and Renk, August 2019–August 2022

Town	Year	Sorghum (1kg)	Wheat flour (1kg)	Cooking oil (1L)	Bar soap (200g)	Charcoal (1 malwa)	Context
Juba	Aug-19	110	190	190	47	126	Juba in Central Equatoria serves not only as a redistribution center for Juba city residents but also for all regions of South Sudan within reach of the Nile as well as other areas across the country.
	Aug-20	180	300	384	67	145	
	Aug-21	729	490	950	133	58	
	Aug-22	N/A	986	400	233	116	
Total increase between 2019 and 2022		74% (to 2021)	68%	36%	66%	-4%	
Bor	Aug-19	181	300	400	124	168	Bor town in Jonglei state heavily relies on Juba for supplies and by extension Uganda in which the supplies are transported via Juba. Prior to the construction of the tarmacked road in 2023, the traders in Bor were reportedly facing difficulties in transportation due to poor road condition, taxation points along the highway and insecurity which created a challenging condition for the delivery of goods and services.
	Aug-20	150	250	500	200	N/A	
	Aug-21	No data was collected in this round.					
	Aug-22	1'021	500	1'700	233	224	
Total increase between 2019 and 2022		70%	25%	62%	31%	14%	
Yirol	Aug-19	503	775	133	67	101	Yirol town, like other major towns in Lakes state, has faced economic shocks over time due to conflict, flooding and other access barriers. Though Yirol town is relatively well connected to Rumbek town to the west and the port of Shambe (in Yirol East County) to the north, adverse seasonal road conditions can leave the town isolated from other parts of the state.
	Aug-20	140	303	600	67	69	
	Aug-21	No data was collected in this round.					
	Aug-22	450	350	2'000	267	112	
Total increase between 2019 and 2022		-6%	-38%	88%	60%	5%	
Renk	Aug-19	84	450	213	100	84	Renk town in Upper Nile state is a key location for trade due to its proximity to Sudan. As many economic hubs in Greater Upper Nile, Renk is facing significant challenges due to flooding, conflict, and the low quality of supply routes linked to poor transportation infrastructure.
	Aug-20	197	300	1'000	165	106	
	Aug-21	No data was collected in this round.					
	Aug-22	681	1'500	3'000	300	174	
Total increase between 2019 and 2022		78%	54%	87%	50%	35%	

Trends in the MSSMEB, food component of the MSSMEB and FPI

Over the assessed period, South Sudan has faced upward trends in the Food Price Index (FPI) and the MSSMEB. In 2020 and 2021, the economy of the country was on a downward trend due to the socio-economic effects of COVID-19, which resulted in a decline in investment and plummeting global oil prices.[64] The graphs below demonstrate the overall behaviour of the median MSSMEB and the FPI trends. However, since August 2022, the FPI has drastically increased due to the global economic upswing after lockdowns and the war in Ukraine affecting fuel and food prices worldwide.

Figure 10: Monthly MSSMEB trends, August 2019 - December 2022

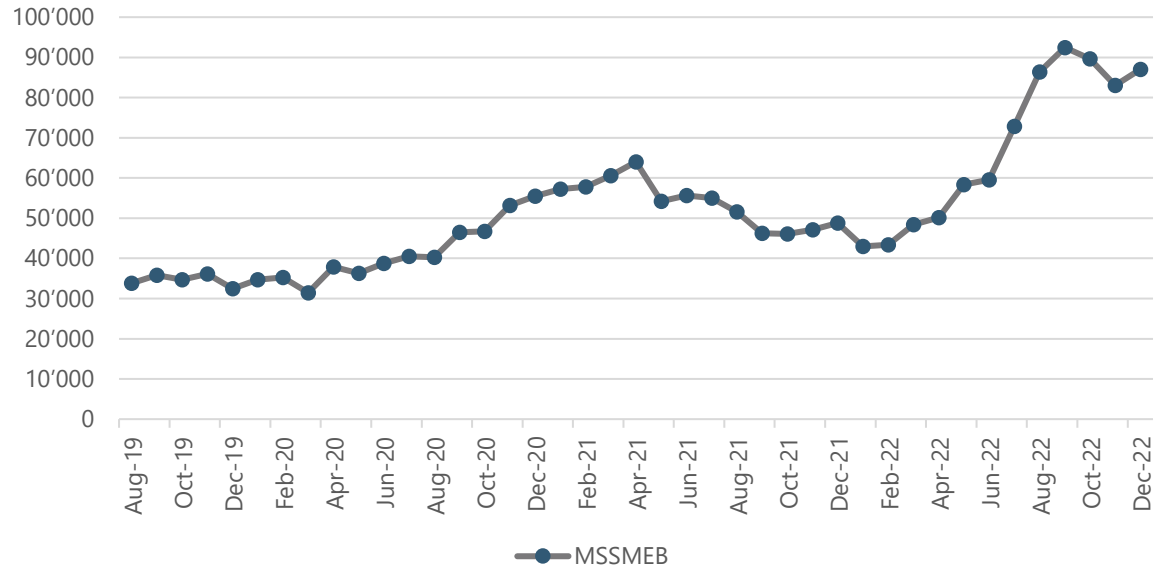
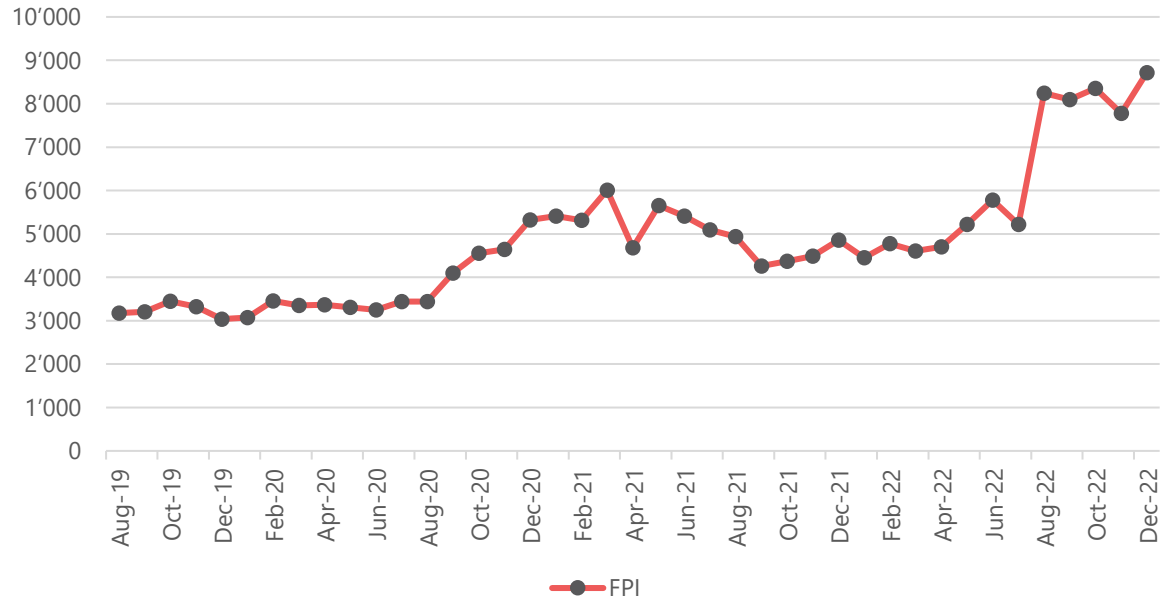


Figure 11: Monthly FPI trends, August 2019 - December 2022



[64] CLiMIS South Sudan Special Report - 2021

In terms of regional level behaviour patterns of the MSSMEB, and the FPI trends, the table below illustrates the breakdown of the increasing overall median trends across the regions from August 2019 to December 2022.

Figure 12: MSSMEB, Food component of the MSSMEB & FPI Trends per region

Region	Year	FPI	Food component of the MSSMEB	MSSMEB	Contributing factors to higher/increasing MSSMEB & FPI
Greater Upper Nile (GUN)	2019	3,252	22,731	35,344	The main economic security challenges are flooding, conflict, low quality supply routes and logistical constraints as a result of poor road conditions.
	2020	3,785	28,830	42,702	
	2021	5,097	37,179	54,728	
	2022	6,181	51,351	65,513	
Greater Bahr el Ghazal (GBeG)	2019	3,213	22,731	34,749	Conflict, as well as flooding in 2019, 2020 and 2021, caused significant crop loses in Greater Bahr el-Ghazal and Warrap. The closure of the border between Sudan and South Sudan has affected terms of trade.
	2020	3,802	28,970	42,835	
	2021	5,093	36,814	54,509	
	2022	6,180	51,606	65,831	
Greater Equatoria (GE)	2019	3,214	22,559	34,749	A deficit in crop production due to erratic rainfall, drought, conflict, displacement, and the socio-economic impact of COVID-19 has affected the business environment and cross-border trade.
	2020	3,790	28,907	42,811	
	2021	5,090	36,850	54,726	
	2022	6,175	51,351	65,602	

Figure 13: MSSMEB Median across all assessed markets in the three highlighted states - August 2019 - December 2022 -

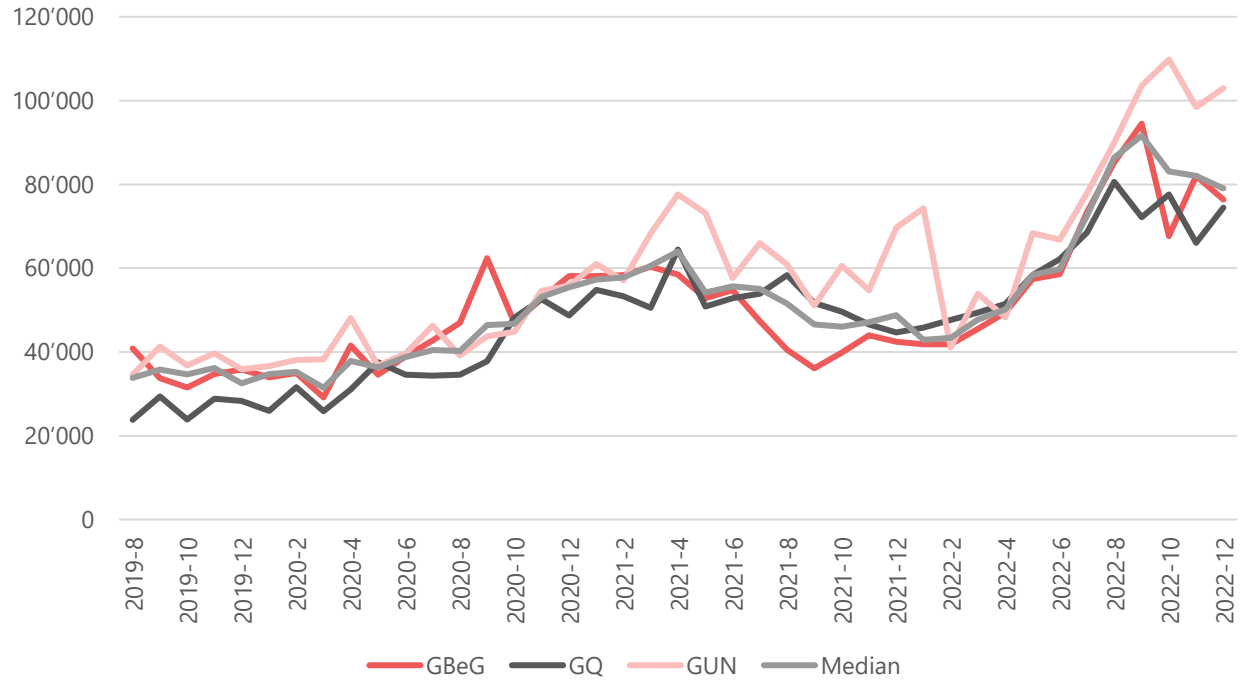


Figure 14 : Food component of the MSSMEB, median across all assessed markets in the three highlighted states August 2019 - December 2022

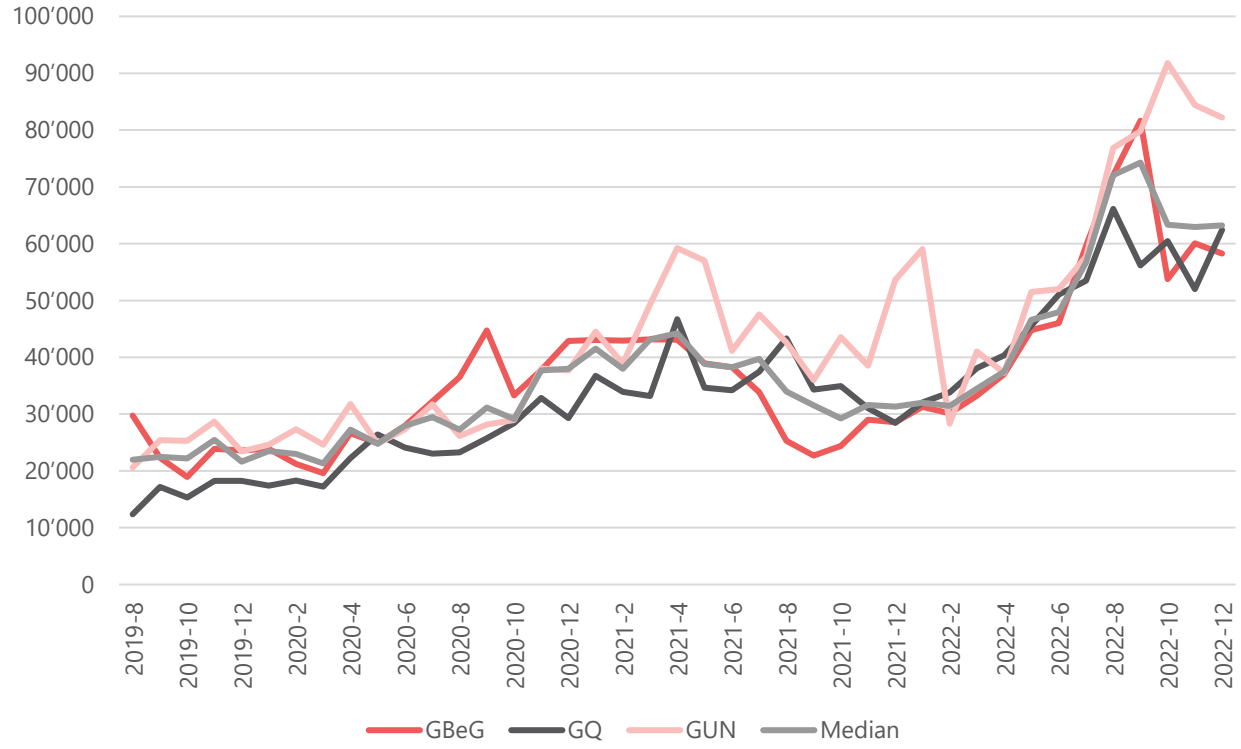
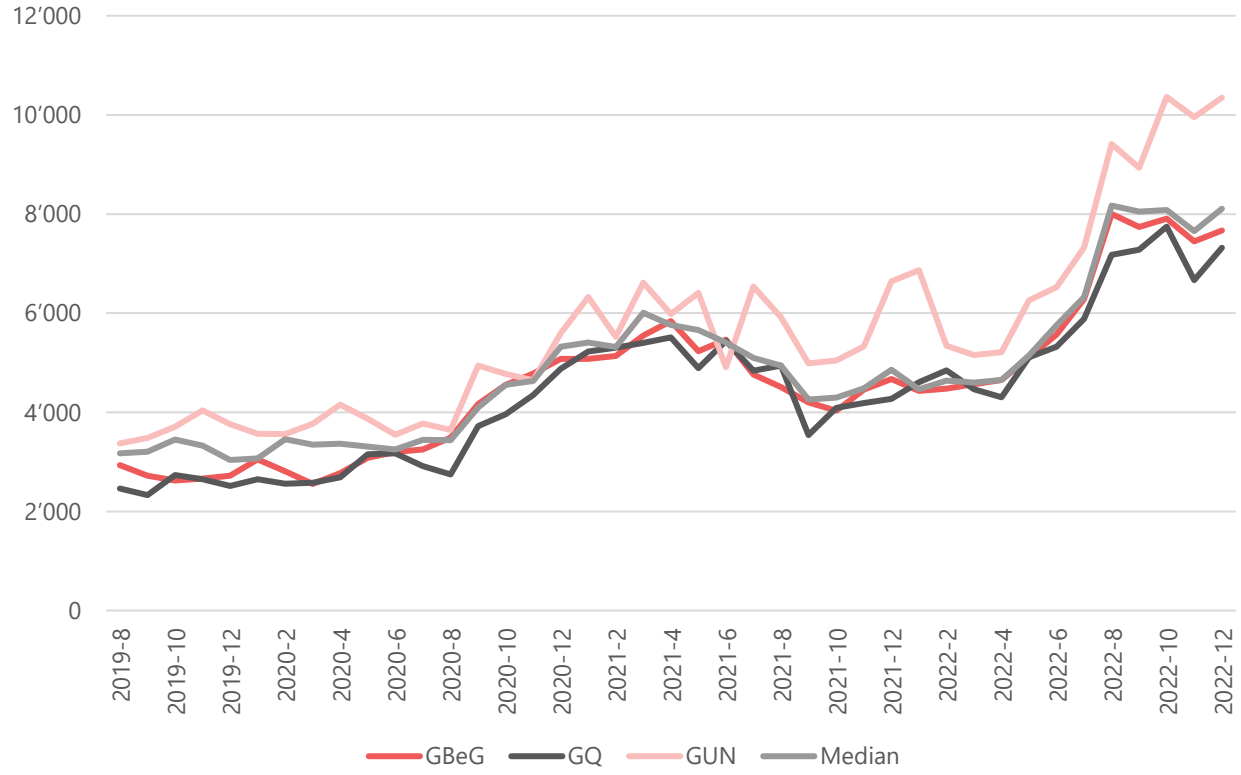


Figure 15: Food Price Index, median across all assessed markets in the three highlighted states, August 2019 - December 2022



Market functionality

In South Sudan a variety of marketplace types are observed:

- Individuals selling and reselling regularly at certain places
- Marketplaces that appear only once or a few times a week on the respective market day
- Mobile marketplaces that move between villages to increase buyer numbers
- Seasonal marketplaces that function only at times of harvest
- Small permanent marketplaces
- Bigger marketplaces where one can buy a diverse range of items

A majority of the markets across the country are facing functionality issues, more so the markets that are based in rural and peri-urban set-ups. Markets in areas with high agricultural production and the ones that are situated in close proximity to border crossings are relatively functional, which has a positive multiplier effect on the costs of the MSSMEB and FPI and from there on household economic well-being. On the other hand, areas with shortfalls in market functionality, such as hard-to-reach areas, record higher MSSMEB costs that have negative impacts on people's lives and livelihoods.

Based on the JMMI data collection from the month of January 2022 to December 2022, on average, 36% of assessed marketplaces were reportedly functional, 52% had reduced functionality (many items were unavailable and prices were relatively high), 10% had limited functionality (staple cereals were unavailable and prices were very high) and 2% had issues with insufficient data quality that did not permit analysis of the level of market functionality.

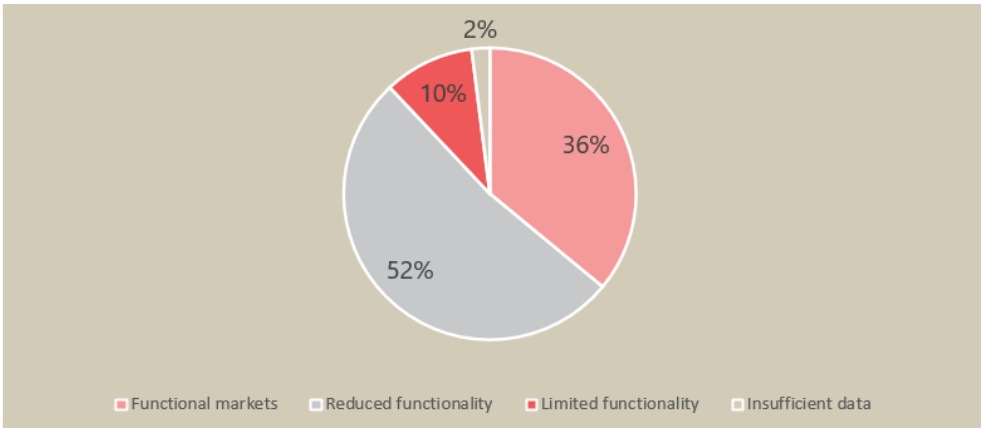


Figure16: Market functionality status, January 2022 – December 2022

Road, river and border crossing conditions are the main factors that determine the level of market functionality. Constraints such as supply route challenges negatively impact market functionality which drives commodity prices, translating into scarcity of goods and leading to high commodity prices. The diverse levels to which these are experienced in different locations help explain the country's price variations. Transportation is the main hurdle to restocking, and the frequency with which JMMI respondents flag the bad conditions of roads and river access points provides a solid indication that improving transport infrastructure would positively impact the supply side of the markets.

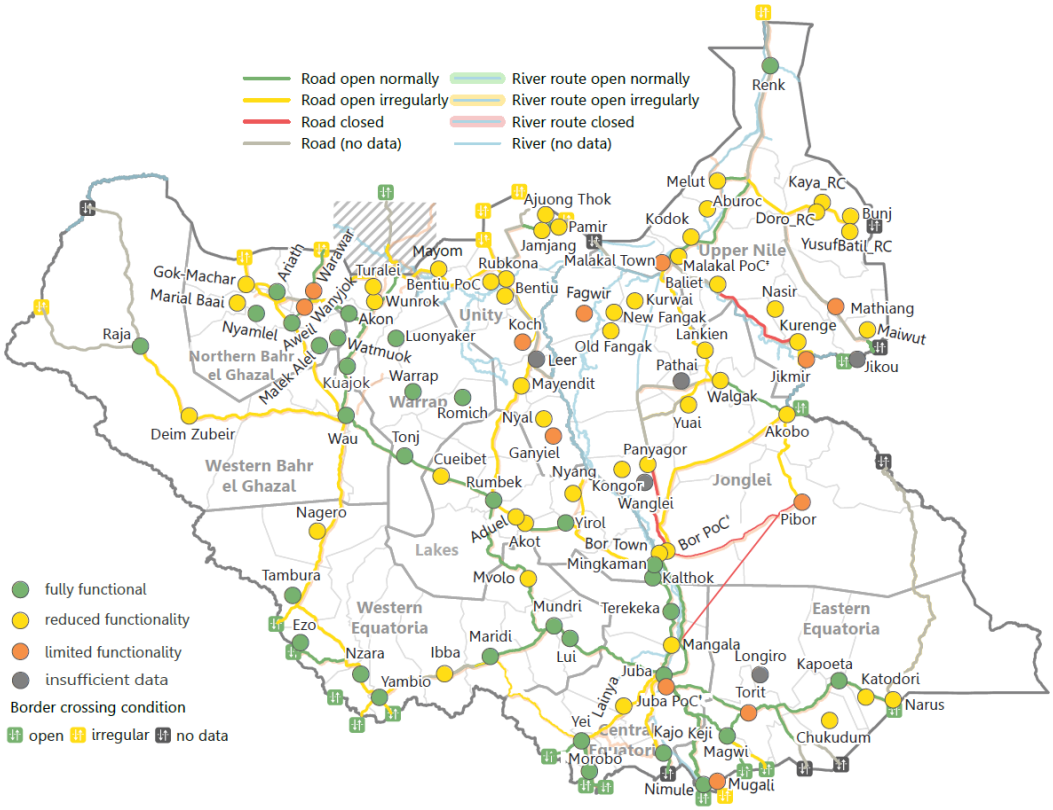
In terms of road condition, South Sudan has one of the world's most underdeveloped road networks, which poses constraints to socioeconomic development.[65] Rural markets often face the brunt of poor road condition during the rainy season, particularly the flooding in 2022 that washed away roads and

[65] South Sudan Road Network

bridges which affected the markets supply chain in Greater Upper Nile and Greater Bahr el Ghazal.[66] Markets with reduced functionality are mostly concentrated in the states of Upper Nile and Jonglei states that are supplied from Ethiopia mainly via river routes. Other areas that are affected by reduced market functionality are largely located in Unity state, especially Koch town, Bentiu, Rubkona, Nyal, etc., which are prone to flood-induced supply chain cuts. For instance, Koch town is supplied via river route and during the rainy season it is very hard to access. Consequently, traders commonly resort to carrying goods by walking, which limits the transported volume of goods. Another example is Aduel in Lake state which is suffering from cattle raids where insecurity makes the supply of goods challenging. Despite the under-developed road infrastructure and pockets of insecurity that hinder movement, access to roads during the dry season plays a vital role in market supply.

An average analysis of the JMMI data from January to December 2022 indicates that out of the 104 roads assessed by the JMMI, 38% were reportedly normally open, 38% were irregularly open, 5% were reportedly closed and19% had issues of insufficient data. Regarding river condition, out of the 13 river access points assessed, 9 were reported to be open normally, 1 was irregularly open, 1 was closed, and 2 others lacked sufficient data to clarify the level of accessibility.
In regards to border crossings, all assessed border points to neighbouring Sudan were reported to be officially closed or irregularly open; other border points leading to Ethiopia, Kenya, the Democratic Republic of the Congo, Uganda and the Central African Republic were normally operational in 2022[67]. The map below illustrates the average market functionality status for all markets assessed from January to December 2022.

Figure 17: Average Market Functionality Map – January 2022 to December 2022



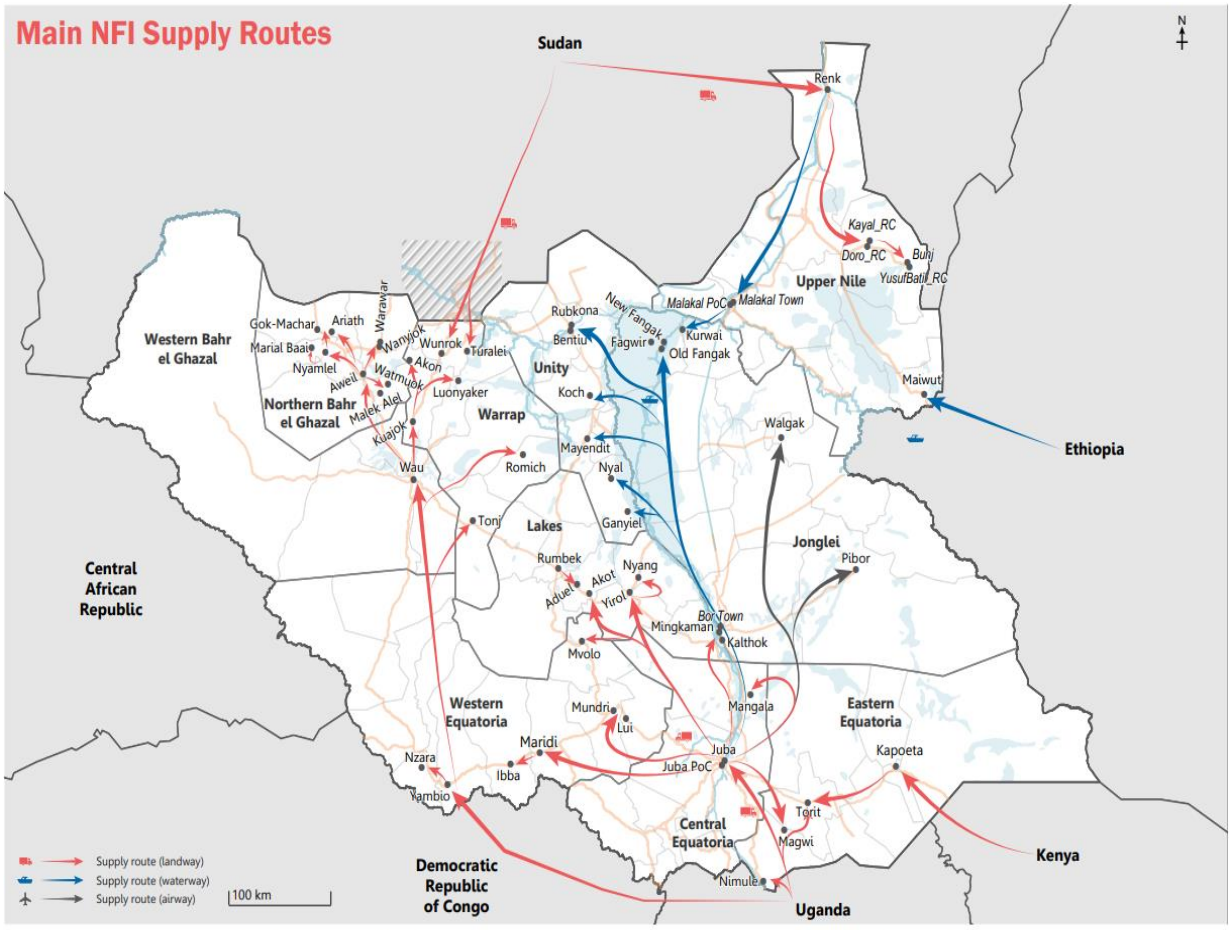
[66] OCHA South Sudan: Flooding Situation Report - October 2022

[67] The current analysis focus on the 2019-2022 period. Therefore, it does not take in into account the Sugan conflict, which started in April 2023.

Impact of regional markets on market functionality

Regional markets in neighbouring countries play a crucial role in market functionality in South Sudan. Uganda is the key source of imported staple cereals to South Sudan, accounting for approximately 97.4% of the trade volume. Other supplying regional countries are Sudan, Ethiopia and Kenya among others.[68] This can make the South Sudanese markets prone to instability connected to that in neighbouring countries. A long-standing border dispute between Sudan and South Sudan has affected cross-border trade since the two countries split in 2011, which has negative effects on towns located close to the border points.[69] The recent conflict in Sudan that erupted in mid-April 2023 and its impact on the South Sudan economy is not covered in this report. Goods are reportedly transported into urban areas (Wau, Juba, Aweil, Akobo, Renk, Bor, Yambio) which serve as local redistribution centres, and from there move outwards into rural areas. Transporting goods to rural areas is costly due to the distances, poor road conditions and taxation at checkpoints which leads to higher prices of commodities. Goods are predominantly transported via land routes, both within the country and across borders, despite the poor road conditions. The only cross-border supply route using a waterway supply route leads from Ethiopia to Akobo. Within the country, the river Nile is used for transports from Juba to northern cities such as Bor, Old and New Fangak, and Bentiu. Goods imported from Uganda supply most of the southern and southwestern parts of South Sudan, while goods from Sudan supply most of the marketplaces in the northern and northwestern parts of the country. Ethiopian goods are generally distributed in the eastern parts of the country.

Figure18: NFI Supply Route Map (JMMI December 2022)



This map illustrates where vendors reported their market location to be supplied from with NFIs. Only the most frequently reported non-food supply market connection is shown for each location. Additional linkages and supply routes may exist.

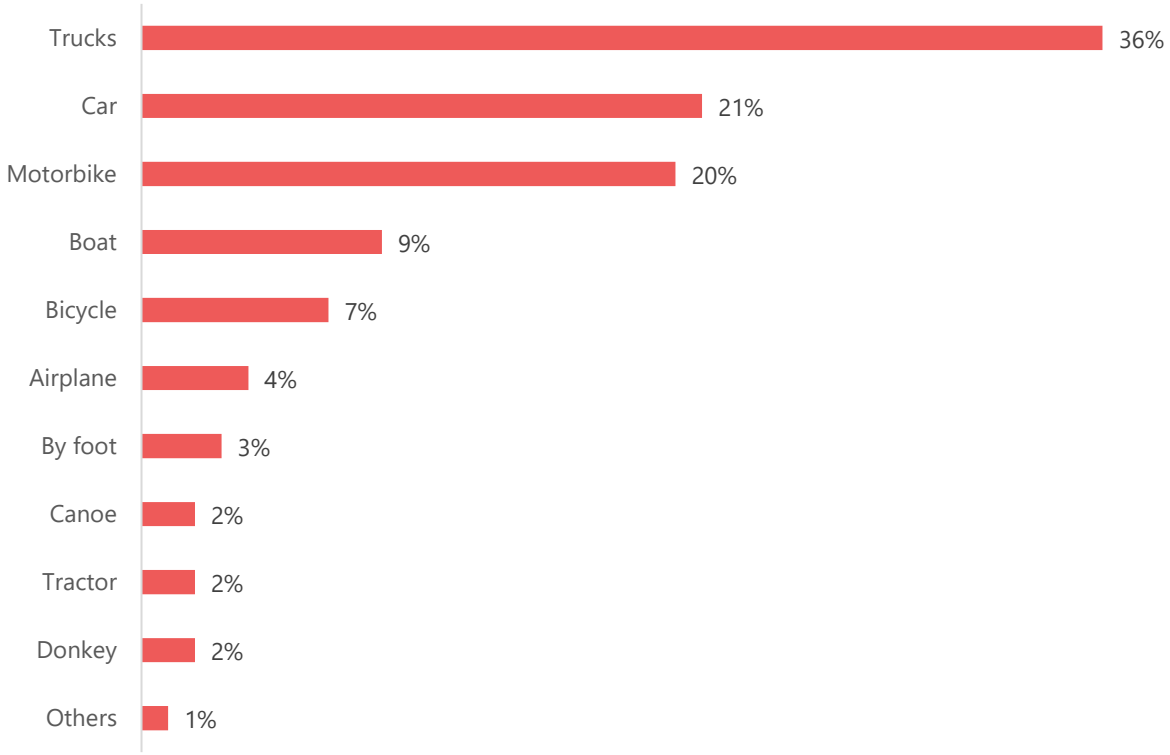
[68] WFP South Sudan - National Market Profile

[69] "Land dispute delaying opening of Sudan-South Sudan border crossing", Radio Tamazuj, September 2022

Means of transport

Interviewed traders reported that trucks are the most widely used means of commercial transport, followed by cars and motorbikes. Other means include use of boats, bicycles, and airplanes. Walking by foot and use of tractors is more pronounced during the rainy season due to poor road conditions.

Figure 19: Main means of transport, per % of respondents on a monthly average – January 2022 to December 2022



Payment modality

The South Sudanese pound (SSP) is the most widely used currency and is accepted by an overwhelming majority (99%) of interviewed traders across the country. Other modes of payment mentioned by the traders include purchase on credit and use of other foreign currencies such as US dollars, Ethiopian birr, Sudanese pounds, Ugandan shillings, Kenyan shillings, etc. Exchange of currencies of the neighbouring countries is common in markets that are in close proximity to border crossing points.

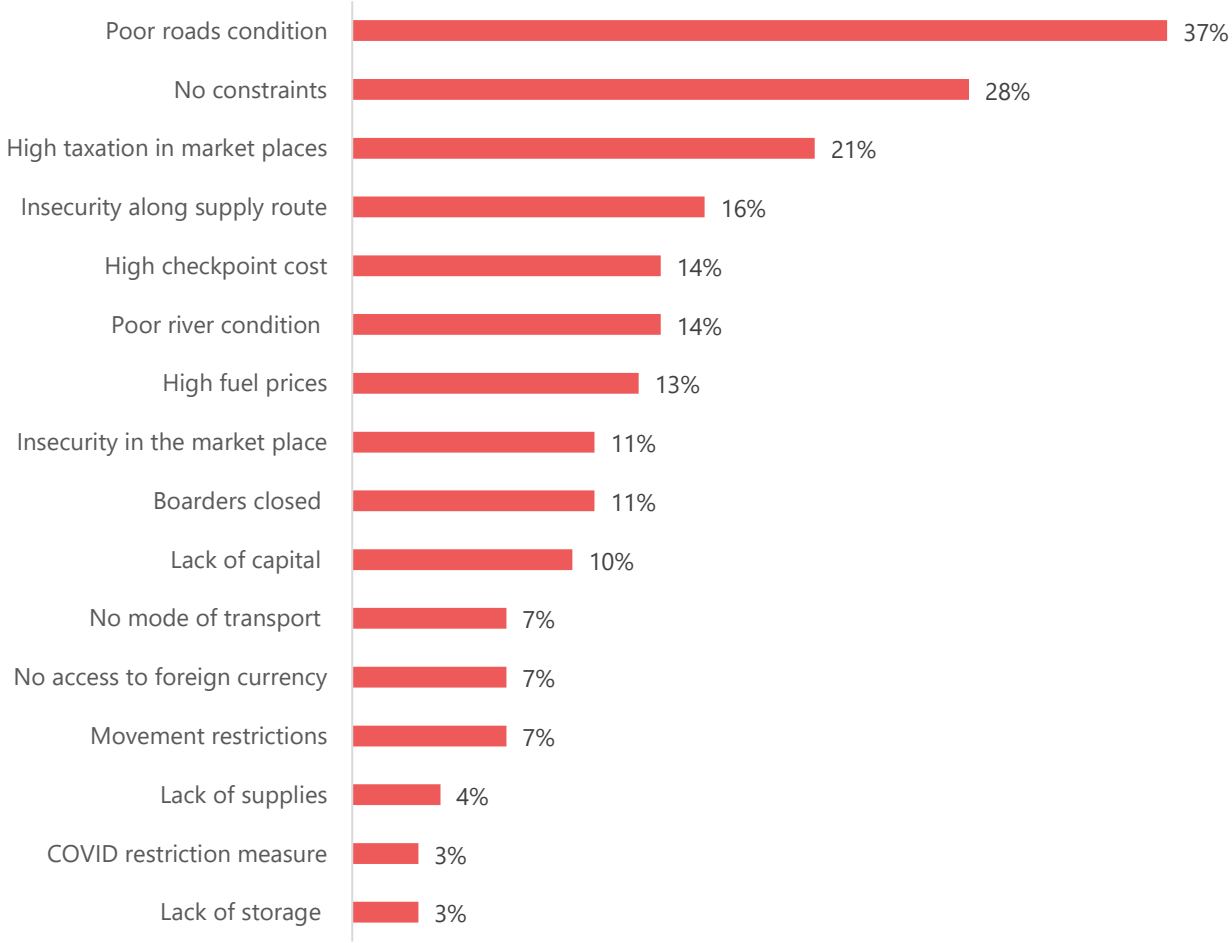
Factors affecting market functionality

Markets in South Sudan are challenged by many interlinked factors affecting their functionality. Entrepreneurs struggle with several challenges when it comes to supply routes.[70] National-level results on market constraints indicate that most interviewed South Sudanese traders are reportedly facing difficulties with supply routes, such as security constraints, poor road conditions, and high taxation in the market, translating into scarcity of goods and restocking constraints, which drives commodity prices. The diverse levels experienced in different locations explain the price variations throughout the country.

[70] WFP South Sudan - National Market Profile

Transportation is the main challenge facing the movement of goods and services. 37% of the respondents reported poor road conditions being the most frequent constraint affecting restocking. The chart below illustrates challenges reported by traders interviewed nationwide during JMMI data collection.

Figure 20. Restocking constraints, per % of respondents on a monthly average from January 2022 - Dec 2022



At the state level, traders in Central Equatoria State reported insecurity along the supply route, insecurity in the marketplaces and taxation as the biggest constraints affecting market functionality. In Eastern Equatoria, the main constraints reported were related to lack of capital, poor road conditions and lack of access to foreign currency.

Figure 21: Main restocking constraints by frequency, per state, from January-December 2022

Regions	No constraints	Lack of capital	Poor roads condition	No Access to foreign currency	Insecurity in market places	Lack of supplies	Movements restrictions	No mode of transport	River condition	Border closure
Western Equatoria	47	16	66	14	5	4	10	7	2	1
Central Equatoria	29	8	5	13	33	2	4	4	5	1
Eastern Equatoria	33	16	15	13	8	4	2	2	2	1
Jonglei	18	6	19	7	13	2	7	5	19	5
Lakes	31	11	37	12	23	2	2	9	6	0
Northern Bahr el Ghazal	61	21	58	3	3	20	1	31	N/A	41
Western Bahr el Ghazal	11	7	5	3	0	0	0	1	2	2
Unity	20	6	18	2	22	2	5	5	11	1
Warrap	0	1	92	0	4	0	33	1	33	51
Upper Nile	20	8	21	5	2	6	7	3	7	8

6. Conclusion

Since its launch in August 2019, the JMMI has been providing data on market prices and functionality to the Inter-Agency Cash Working Group and its partners. Over the course of three years, availability of information on markets in South Sudan has improved tremendously, assisting actors giving out cash and voucher assistance (CVA) in understanding the price developments, supply chains and market dynamics.

Markets in South Sudan have remained volatile since August 2019 with the economic situation deteriorating and compounded shocks impacting access to markets. Difficult trade conditions such as disruptions in the supply routes, especially during the rainy season, continue to have major impacts on the markets, resulting in higher prices. Shocks such as insecurity and seasonal flooding also had strong effects on market functionality. However, the traders in remote areas have shown tremendous resilience, undertaking efforts to ensure that goods reach markets resulting in markets remaining relatively functional.

Since August 2019, the key problems affecting most markets have stemmed from broader political and economic issues linked to currency – both lack of access to United States dollars and the increase in the dollar exchange rate in the parallel market. The exchange rate fluctuations have had major impacts on the volatility of market prices with fluctuations in the prices of basic goods often closely match trends in the parallel-market exchange rates. As most goods in South Sudanese markets are imported , parallel-market exchange rates remain a good indicator of price developments.

Numerous markets are currently facing significant challenges such as inflation and supply chain disruptions. Unfortunately, this has resulted in a significant increase in costs for the MSSMEB across different regions from August 2019 to September 2022. For example, in Greater Bahr-el Ghazal, costs have risen by 131%, while in Greater Equatoria and Greater Upper Nile, they have increased by 239% and 217%, respectively. The GUN and GBeG regions have been negatively affected by security and political events, while Greater Equatoria and GBeG have been affected by climate change, including floods and droughts.

Due to cumulative shocks, South Sudan's economy continues to be vulnerable, negatively impacting people's livelihoods. The price burden affects households' capacity to purchase basic food and non-food items due to limited livelihood strategies. Continuous monitoring of markets can help humanitarian actors to understand the fluctuations in prices. The monitoring can be particularly beneficial when implementing CVA and livelihoods programmes. Bridging information gaps by expanding coverage of less known markets and consistently mapping the supply routes would help humanitarian actors in reaching out to vulnerable population groups and designing of intervention from an evidence-based point of view. Connections between local producers and marketplaces need to be further explored as price development for locally produced items can differ from those of mainly imported commodities. There is a growing interest among the humanitarian partners in South Sudan to review and broaden the current set-up of the MSSMEB by including additional items and indicators such as NFI, shelter and WASH kits aimed to better inform the operational needs of the IACWG.

All in all, South Sudan is a country facing compounding shocks and a challenging legacy of multiple conflicts and climate-induced shocks. The majority of its population is impoverished and faces economic vulnerabilities. The government sought solutions for financial shortages by borrowing and by implementing monetary easing policies, which has led to further aggravations. It is hoped, however, that recent reforms spurred by IMF grants may lead to lasting positive change for the South Sudanese economy. The success of future reform will need to be assessed.

ANNEX

Annex 1 - JMMI participating agencies

CARE
Community in Need Aid (CINA)
CONCERN
Coraid
DanChurchAid (DCA)
International Organization for Migration (IOM)
International Rescue Committee (IRC)
Lomore Development Organization (LDO)
Malteser International
Nile Hope
Norwegian People's Aid (NPA)
Oxfam
REACH Initiative (IMPACT Initiatives)
Save the Children
Solidarités International
Support for Peace and Education Development Programme (SPEDP)
South Sudan Grassroot Initiative for Development (SSGID)
Tearfund
United Nations High Commissioner for Refugees (UNHCR)
Wider Aid and Development Agency (WADA)
Welthungerhilfe (WHH)
World Vision
Relief International
South Sudanese Red Cross (SSRC)
Star Trust Organization (STO)
ACTED – Agency for Technical Cooperation and Development
Danish Refugee Council (DRC)
National Relief and Development Corps (NRDC)
Norwegian Refugee Council (NRC)
Action Contre La Faim (ACF)
Polish Humanitarian Action (PAH)
CAFOD-Trócaire – Catholic Agency for Overseas Development & Trócaire
Caritas
Church & Development
GOAL
Hope Agency for Relief and Development (HARD)
Integrated Community Peace & Development Organization (ICPDO)
Plan International
United Nations Children's Fund (UNICEF)
Windle Trust International
Universal Network for Knowledge & Empowerment Agency (UNKEA)

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