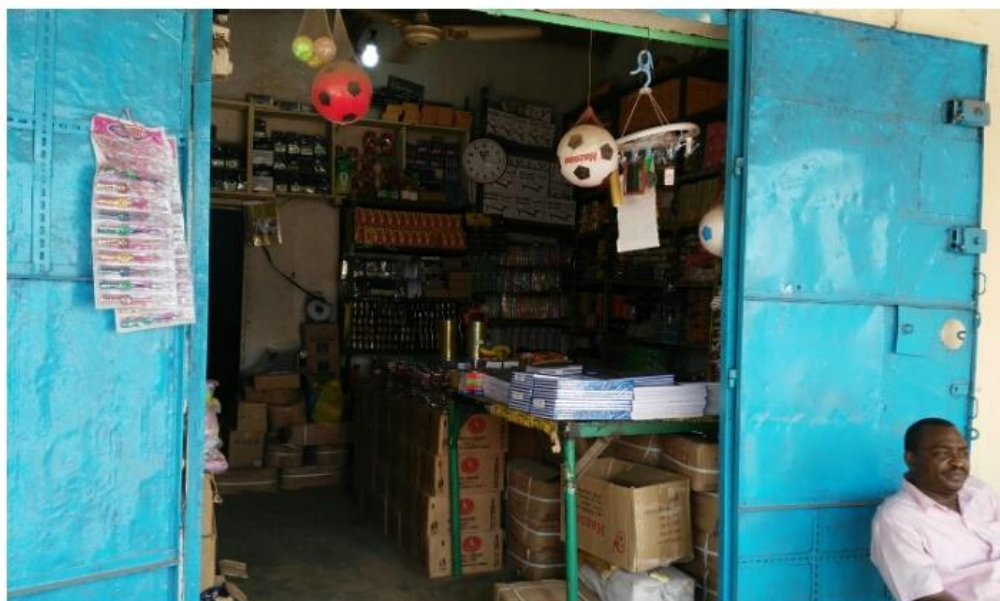




CLiMIS

Crop and Livestock
Market Information System
South Sudan



South Sudan Traders Survey Technical Working Paper

November 2015 (Data collected in July-Sept 2015)



Food and Agriculture Organization
of the United Nations



This initial report presents the findings of the pilot market assessment exercise conducted in Juba, Wau, Kuajok, Rumbek and Aweil Markets during the Jul-Sept 2015 period, which is part of broader activities under Crop and Livestock Market Information System (CLiMIS). The outcome of this pilot has subsequently triggered a multi-agency (comprising FAO, WFP, FEWSNET, NBS and MAFCRD) country-wide systematic market assessments covering all the state capitals. The field work expected to be finalized in December 2015 and the report to be published in Jan/Feb 2016.

The author, Kennedy Nanga, FAO/AFIS Econometrician, of this technical working paper would like to acknowledge that the opinions presented herein are exclusively of the writer as received from the field and do not in any way represent the official position of FAO.



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Executive Summary

Between July and September 2015, FAO/AFIS South Sudan led an inter-agency¹ trader survey exercise in Juba, Wau, Kuajok, Rumbek and Aweil markets with the following objectives:

- i. Assess the market functioning and level of activities.
- ii. Document origins, flows and supply conditions of main staple foods.
- iii. Understand the challenges facing traders along the commodity supply routes.
- iv. Document the units of measurements used by retailers and wholesalers for the main food commodities sold in the markets.

This report provides a summary of findings from this trader survey. The sample included 309 retail and wholesale traders across the four markets.

The findings show that;

- i. Most markets surveyed were functioning near optimal levels. However, about 50-70 percent of the traders indicated that supply of most commodities had decreased in all the markets compared to the beginning of the year and the same time last year. Dwindling trade volumes for imported commodities were on account of acute shortage of the hard currency (USD), increased cost of transportation and restricted trade flows. Supply of locally produced commodities, like sorghum and ground nuts, were limited during the survey period (June-August) which coincided with the pre-harvest peak of the lean season when food stocks for most agro-based households are at their lowest level and trade supply from local production is minimal. Normal commodity supplies were recorded for sorghum in Wau and Juba; mainly on account of WFP food assistance. Fish supply to Juba, Wau and Kuajok increased in line with seasonal trends.
- ii. Food market activity was reportedly cyclic; mostly active and busy during the end of the month when salaries of most people are paid and money supply adequate but less active in the mid and third week of the month. Traders take advantage of this trend by inflating food prices during the end of the month. Grain importers in Rumbek, buoyed by monopoly, are raking super-normal profits by charging premium prices at the expense of consumers.
- iii. Most of imported food in the surveyed markets came from Uganda, followed by Sudan and the Middle East countries. In particular, the Rumbek market and to a small extent Juba market, were almost

¹ Market Information System (MIS) partner agencies, government departments and local NGOs-including; National and state Ministries of Agriculture, WFP, FEWS NET, NBS, ACTED, CORDAID, HeRY, NRC, L-CAD, NPA, Oxfam, Concern Worldwide



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exclusively supplied by commodities originating/coming from Uganda through Nimule, while food imports in Wau, Kuajok and Aweil were from both Uganda and Sudan. The imports from Sudan were mainly smuggled through informal channels and traditional trading routes.

- iv. Market supplies of locally produced foods were mostly coming from farmers and fishermen and in some cases by traders who assemble them from farmers/farmer associations. Local population dominates retail trade of local commodities while foreigners dominate whole trade of imported commodities. High initial capital requirement in addition to lack of linkages with the international supply chains crowd out the local population in participating in large trans-border wholesale trade and transport businesses.
- v. High transportation costs and low domestic agricultural productive capacity² stood out as the main challenges affecting supply of locally produced food (sorghum, groundnuts, mineral water and fish). The high transportation cost was attributable to high cost of fuel, insecurity, multiple taxation regimes and poor roads. Cost of transporting commodities was particularly high for Rumbek market compared to the rest due to persistent and chronic insecurity in Lakes State.
- vi. For imported commodities, exchange rate devaluation, acute shortage of dollars and fuel and high transport costs were the main constraints to trade flows. The latter (high transport costs) featured prominently in Wau, Kuajok, Rumbek and Aweil markets³. However in Juba market, the main challenge was currency devaluation. Analysis indicated that inflation is positively correlated with South Sudanese Pound devaluation. Therefore the volatility in food prices can be reduced by fixing the challenges affecting the SSP/USD dollar exchange markets.
- vii. Successive months of rising food prices in 2015 saw significant reduction in the consumer purchasing power of most consumers leading purchases in smaller, but more expensive, quantities.

² On the backdrop of high dependence on imports and highly volatile exchange rate markets

³ The challenge of high transportation costs for imports was relegated to second position after currency devaluation, most probably on account of the tarmacked Nimule-Juba road.



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Background

In situations of prolonged conflict, affected populations tend to diversify livelihood options, adopt new coping mechanisms and in the long-run recover lost capacities in order to meet essential needs. The success or failure of these absorptive, adaptive and transformative mechanisms depends on among other factors, how both input and output food and labour markets function⁴. The proper functioning of markets is therefore necessary for conflict-affected populations to recover their livelihoods.

However, access to functioning markets remains restricted in many parts of South Sudan, exuberated by recurrent and increasing scale of conflict. Markets are dysfunctional, inefficient and poorly integrated. They are characterized by inefficient supply networks, few players and rampant monopoly. Widespread poor road infrastructure, collusive behavior of dominant traders and high cost of transportation are abound. In particular, the destruction of market infrastructure in most of the conflict affected states of Greater Upper Nile in addition to restricted trade movements and multiple taxation regimes has devastated proper market functioning with resultant high food inflation in 2015.

Reduced livelihood options and the prevailing economic downturn have compromised the purchasing power of most poor households, more so those living in urban areas who are heavily reliant on markets for food and income. The prevailing macroeconomic challenges and structural constraints to trade and markets are not expected to ease in the near-term and will drive price inflation resulting in high cost of living and reduced consumer purchasing power. Hence, food security and other sectoral response policies for urban poor population will continue to attract attention of both humanitarian and development actors in the short-run.

FAO in South Sudan implements humanitarian and resilience building programmes in both rural and urban areas. Analysis of markets is therefore an integral part of FAO work in the country and is integral in designing appropriate livelihood support, recovery and resilience building responses.

This report presents the findings of a FAO-led inter-agency trader survey exercise that was carried out in Juba, Wau, Kuajok, Rumbek and Aweil markets during July-September 2015.

⁴ There is increased recognition by the humanitarian actors that market forces play an important role in helping people withstand and recover from shocks.



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Objectives

The trade survey was intended to;

- i. Assess market functioning and level of activities in Juba, Wau, Kuajok, Rumbek and Aweil markets.
- ii. Document origins, flows and supply conditions of main staple foods sold in the markets.
- iii. Understand the challenges facing traders along the commodity supply routes.
- iv. Document the units of measurements used by retailers and wholesalers for the main food commodities sold in the markets.

Methodology

Between July and September 2015 FAO/AFIS South Sudan in collaboration with South Sudan Market Information System (MIS) partners, conducted pilot trader surveys in Juba, Wau, Kuajok, Rumbek and Aweil. The data was collected through a questionnaire from a random sample of traders. A mix of retail and wholesale traders were targeted for interviews resulting in a total of 80 questioners per market. Five data collection teams each comprising 20 data collectors and four supervisors visited each market. The survey response rate is presented in the table below;

Table 1: Response rate

	Field data collection date	No of valid responses	Response Rate
Juba	17 th June 2015	55	69%
Wau	2 nd July 2015	67	84%
Kuajok	6 th July 2015	76	95%
Rumbek	24 th Aug 2015	60	75%
Aweil	30 th Aug 2015	51	64%

The survey focused on key staple commodities including; maize flour, sorghum flour, wheat flour, rice, sugar, fish, mineral water, ground nuts and vegetable oil. Data was entered in a user designed open e-form and analyzing was done with SPSS.



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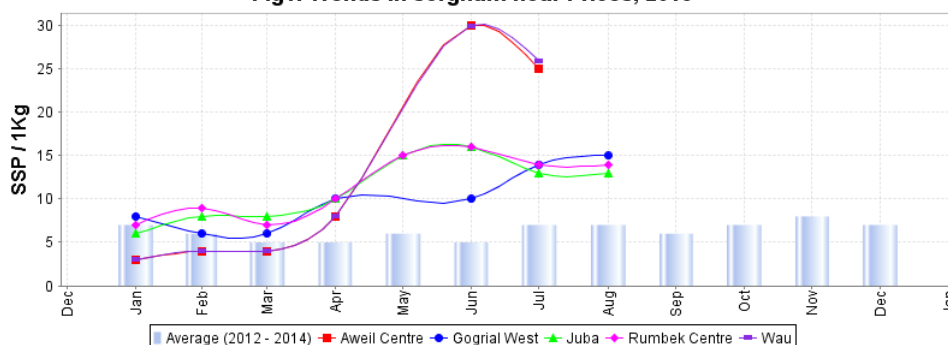
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Findings

Market functioning and level of market activity

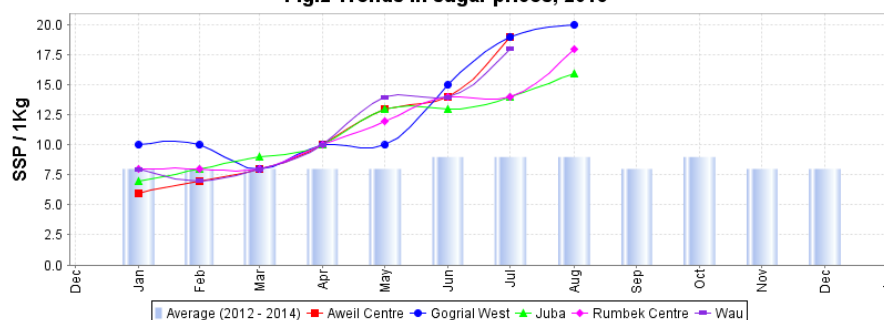
The traders were asked to rate the level of market supply food commodities compared to January 2015. Results presented in table 2 indicate that the supply of most commodities under review had decreased in all surveyed markets when compared to the beginning of the year.

Fig1. Trends in sorghum flour Prices, 2015



Significant devaluation of the South Sudanese Pound (SSP) against the US dollar (USD) in 2015, acute shortage of the hard currency and fuel in addition to increased cost of transportation, and restricted trade flows led to low import volumes and high food prices (Fig 1 and 2). The SSP has experienced significant currency-exchange rate volatility this year, aggravated by a strong predatory speculative economic network of cartels exploiting the already fragile macroeconomic situation in the country. High exchange rate volatility is still expected in the short-run. This comes at a time when the country's economy continue to face a major financial squeeze with oil revenues drying up, foreign reserves depleted and fiscal deficit widen; with serious ripple effects on the food markets. Not until oil fields are fully functioning and security levels improve in the country can we expect stability in the SSP-USD exchange rates. Prices of imported food are not likely to come down in the near-term.

Fig.2 Trends in sugar prices, 2015



Flows of locally produced commodities like sorghum and ground nuts were limited during the survey period (June-August) which coincided with the peak of the lean season when households stocks are limited and market supply from harvests minimal. Normal commodity supplies were recorded for sorghum in Wau and Juba; mainly from World Food Program (WFP) food distributions.



Sugar supply through informal channels from Sudan was near normal in Wau and Aweil markets. Fish supply to Juba, Wau and Kuajok increased during the May-August period in line with the peak of seasonal fishing activities. Supply of mineral water was normal in Juba, Wau and Rumbek, but decreased in Kuajok and Aweil. Local water processing factories are based in Juba and Wau but supply Rumbek, Kuajok and Aweil markets.

Table 2: Commodity supply level in June-July-August compared to January 2015

	Juba	Wau	Kuajok	Rumbek	Aweil
Sorghum	82%	40%	52%	53%	71%
Groundnuts	48%	53%	58%	42%	73%
Maize	52%	51%	50%	44%	67%
Rice	52%	52%	44%	42%	54%
Wheat flour	79%	50%	55%	46%	58%
Vegetable oil	59%	49%	48%	42%	36%
Sugar	62%	39%	47%	40%	49%
Fish	67%	39%	50%	38%	72%
Mineral Water	56%	78%	54%	53%	44%

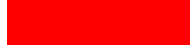
High/increased



Normal/same



Low/decreased



Detailed observations of market functioning and activities (at the time of the survey) are presented for each market as below:

Konyokonyo/Juba:

- The market was active and normal and most consumers were able to physically access the market.
- There were many sellers, interactions were normal, but the effective demand was low for some commodities due to high prices.

Wau:

- Most commodities were available in the market, but at high prices.
- There were many buyers in the market, particularly women and children as the survey date also coincided with the end of the month when salaries had been paid and markets busy.
- Most buyers were buying commodities in small quantities; a pointer to reduced purchasing power after months of rising food prices.



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- Small scale trade for vegetables, groundnuts, fish and other locally produced commodities was dominated by the local population, while the wholesale business of imported items was essentially dominated by Darfurians. Cases of children selling local food items were also observed.

Aweil:

- The market was functioning well but the level of activity was low due to low of purchasing power from consumers.
- Market activities were reportedly cyclic depending on the time of the month; peaking in the last first and first week of the month when salaries of government and NGO workers were normally paid.
- Most of the food available in the market was imported although locally produced dry fish and groundnuts were abundant at the time of the survey.
- A partial closure of the Sudan-South Sudan border in April 2015 because of presidential elections severed historic supply routes for food, fuel and other consumer goods resulting in biting shortages. The halt stoked double-digit inflation as traders began to rely on goods trucked-in from Kenya and Uganda at a premium.
- At the time of the survey, the market was dominated by Sudanese Arabs, Ugandans and Ethiopian wholesale traders, while the local communities were mostly in retail trade. However, about 20 percent of foreigner traders have closed their shops because of high SSP/USD exchange rate, official closure of borders by Sudan Government and high transportation cost from Juba.
- The Juba to Aweil (NBG) trading route remained open for trade movement, while the road from Sudan was closed. However, there were minimal informal commodities⁵ flows from Sudan into the country. By contrast, maize flour, maize grain, cooking oil, sugar and rice were supplied mainly from East Africa through Juba.

Kuajok:

- The market was functioning normally, busy with many buyers (particularly women and children) mostly from around Kuajok town and neighboring Twic and Gogrial East counties. However, most buyers did not have the adequate purchasing power due to high food prices and were mostly buying in small quantities.
- Small scale trade for vegetables, groundnuts, fish and other locally produced commodities was dominated by locals, while the wholesale and large retail shops selling imported commodities were dominated by Darfurians and Ethiopians, with only few local actors.
- There were a number of retail traders mostly locals selling in small quantities, commodities like vegetables and sorghum flour.

⁵ especially for sorghum, wheat flour, onion, rice, soap and sugar



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- Market activity was reportedly cyclic; mostly active during the end of the month when money supply is adequate but less active in the mid-third week of the month. Traders take advantage by inflating food prices during the end of the month.
- Prices were reported higher than the month before. Reasons cited for increased food prices included lack of dollars; high cost of transportation and insecurity along the supply routes particularly in Lakes State and Mundri in Western Equatorial State. Sudan Border closure in April-May also resulted in high prices. The border was reportedly open in July/August, but trade remained restricted.
- Trade and market supplies were mostly depressed in May following the effects of the of the currency devaluation. However, traders were able to make necessary adjustments⁶ to hedge increased dollar costs and by July 2015, market availability of most imported food went up. Most wholesale shops closed in April-May due to supply shortage and government price control requiring them to reduce food prices. As a consequence prices of some imported commodities, like sugar⁷ and rice, decreased slightly. In the entire State, prices are the highest in Gogrial East county due to poor conditions of the road between the county and Wau. WFP sorghum was being sold in the market.
- Fish prices were high, but the profit margins for traders were reducing due to high transport costs. Poor conditions of existing roads or the total lack of road connection from fishing sites in Warrap to markets severely constrained traders' capacity to transport their catch, which is often limited to the use of very expensive cost of hiring motorbikes.
- Smuggling through Sudan border was very rife. However, some items that were usually sourced from Sudan like pulses were limited in the market.

Rumbek:

- The market was busy and active with many sellers and buyers. Many traders sourced commodities from wholesalers.
- Most commodities sold in the market are imported mainly from Uganda. Supply of whole grains as the survey period coincided with the pre-harvest time and the local production was yet to reach markets.
- Wholesale trade was dominated by Ugandans and Darfurians while the small scale retail trade (selling locally produced commodities) was almost exclusively run by local population.
- Most consumers were buying in small quantities due to high food prices. Reduced supply of some commodities like cereals to the market were recorded due to persistent insecurity along the Juba-Rumbek road, the main supply route for most traders. The market is mainly consistent of many retail shops and

⁶ Traders of foreign origin were able to get additional dollars from their home countries to enable them pay for imports

⁷ Sugar came down to SSP 18 in July from 20SSP/Kg in June).



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few wholesale outlets. The traders indicated that high initial capital requirement in addition to lack of linkages with the international supply chains limited local population capacity to venture into large wholesale trade and transport business.

- Products from Sudan were not available in the markets at the time of the survey due to:
 - Official Sudan-South Sudan border closure
 - Insecurity/militias in North Kordofon and Darfur States that discouraged transporters as cases of looting, killings and loss of tracks abound
 - Bad roads between Darfur border and Lakes in addition to insecurity along the supply route compared to Juba-Rumbek road.
 - Use of river transport limited due to insecurity
- Transporters were still willing transport commodities from Juba despite the inherent risks due to the high returns from transport charges. The risk premium of moving commodities from Juba was considered lower than from Sudan.

The following case study provides the cost structure of maize imports from Uganda to Rumbek Center.

Case study 1: food importers in Rumbek Market raking phenomenal profits

- Rumbek market was a classic case of dysfunctional market; there exist few dominant food importers who were able to control prices; the supply network was grossly inefficient and the road blockage and insecurity related charges and inflated cost of transportation resulted in very high prices of food.
- The market assessment survey in Rumbek showed that importers were making exceptional and well above average profits, sometimes up to 100% of the total cost of imports.
- There were only five whole grain importers in Rumbek town which supplied most of the traders in the counties of Lakes State.
- While formal custom charges amounted to nearly 15% of the total cost of importing five tons of maize, this was surpassed by informal and formal taxes charged at every road block and county between Nimule and Rumbek. *"We pay between 15-20 SSP for every 50kg bag before the goods can reach Rumbek. In addition there are multiple charges the different county authorities whenever cargo passes their jurisdictions. This includes police, chief and army road blocks"* said one of the grain importers.
- Table 3 below presents the cost structure of importing 50 tons of maize in a truck by road from Uganda to Rumbek Centre.



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Table 3: Cost structure of importing 50 tons of maize in a truck by road from Uganda to Rumbek Centre

	Cost (SSP)	Share of Costs
Cost of 50 ton of maize in Kampala	60,000	38%
Formal and informal taxes (20 ssp/50 kg bag) between Nimule & Rumbek	20,000	13%
Road transport cost (Kampala-Nimule-Rumbek)	20,000	13%
Customs and other border charges at Nimule	17,500	11%
Incidental/business owner costs (Transport/ accommodation and air fare)	3,000	2%
Total Direct Cost	120,500	77%
Indirect devaluation cost/exchange rate losses since Jan 15	36,000	23%
Total importation cost	156,500	100%
Wholesale sales value of maize 50 tonnes	300,000	
Gross Profit in SSP	143,500	92%
Gross Profit in USD (at parallel market exchange rate)	11,967	

Commodity flows/origins

Table 4 provides a summary of the main sources of food commodities traded in the markets under survey during June-July-August 2015. From the information, it was evidenced that:

- Most of imported food in the surveyed markets comes from Uganda, followed by Sudan and the Middle East countries. In particular, Rumbek and Juba markets are supplied almost exclusively from Uganda; while food imports in Wau, Kuajok and Aweil are from both Uganda and Sudan. All supply from Uganda to most towns near Juba and to the Greater Bhar el Ghazal and Upper Nile pass through Nimule-Juba road.
- Even though the Sudan-South Sudan border remained officially closed, some informal trade continues.
- Locally produced foods are supplied to markets either by farmers, local traders and fishermen
- Significant amounts of WFP sorghum are sold in most markets

Below is a detailed summary of the commodity origins by type of food;

Sorghum: Normally, the sorghum sold in most markets immediately after harvests comes from local production; supplied to the markets either directly by farmers/ farmer associations or assembled by traders. Northern towns of Wau, Kuajok and Aweil rely mainly on sorghum imported from Sudan. The survey period coincided with the peak of the lean season and most of the sorghum sold in the markets was from tradable stocks and WFP food distributions. As shown in table 4, about 49-85% of the retail traders indicated that they were supplied the sorghum by local traders who assemble them from farmers/ farmer associations.



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Groundnuts: The majority of interviewed traders indicated that groundnuts were mostly sourced from farmers; with the highest proportion recorded in Juba, Rumbek and Aweil. Most of the groundnuts sold in Wau, Kuajok and Aweil were grown in the counties of Northern Bahr el Gazal State. In Juba, most of the groundnuts came from the counties of the Greater Equatoria.

Beans/Janjaro: Most of the beans sold in the markets were imported from Uganda. Beans from Sudan were also sold in Wau and Aweil. Sudan beans were not available in Rumbek market at time of the survey due to restricted river transport.

Maize Grain: Most of the maize sold in the markets at the time of the interview was supplied from Uganda.

Rice: Most of the rice sold in Juba was supplied from Uganda, with only small quantities originating from Middle East countries India, Pakistan, Saudi Arabia and; Egypt. Some were from Thailand. The rice sold in Wau market came mainly from Uganda, Sudan and the Middle East. Rice sold in Kuajok and Aweil was sourced primarily from Uganda and to a small extent, Sudan; while Rumbek market was mainly supplied by rice from Uganda.

Wheat flour: Most of the wheat flour sold in Juba, Rumbek and Aweil markets was sourced from Uganda, while Wau and Kuajok markets relied on imports from both Uganda and Sudan.

Sugar and Vegetable oil: Sugar and vegetable oil sold in Juba and Rumbek markets were imported from Uganda, while the other markets (Wau, Kuajok and Aweil) relied on sugar from both Uganda and Sudan.

Fish: Most of the fish sold in all surveyed markets was supplied from local fishermen/ fish traders. However, some fish sold in Rumbek market also came from Uganda. Fish sold in Wau and Kuajok market was mainly from Gogrial East County of Warrap State. In Lakes State, fish was supplied mainly from the three lakes in the state viz.; Nibor, Yirol and Anyiand and also through rivers Akew and Nam. Dry fish also comes from Juba.

Mineral water: is locally manufactured in factories in Juba and Wau which supply all other markets. Some water sold in Rumbek is also imported from Uganda.



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Table 4: Origins/ Main sources of food commodities traded in the markets (June-July-August)

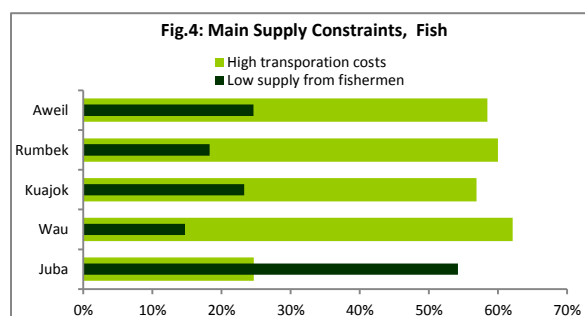
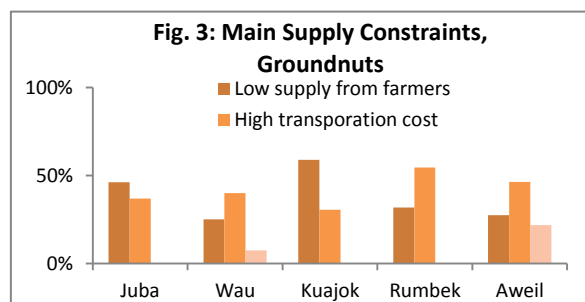
Commodity	Juba		Wau		Kuajok		Rumbek		Aweil			
Sorghum Flour	65%		60%		78%		49%		85%			
Groundnuts	88%		62%		67%		87%		91%			
Beans/Janjaro	75%		53%	34%		69%		83%		63%	21%	
Maize Flour	81%		65%		70%		84%		67%			
Rice	70%	25%	36%	30%	20%	67%	18%	72%	60%	29%		
Wheat flour	85%		77%		14%		51%	33%	86%		83%	
Sugar	60%		43%		42%		55%	24%	84%		48%	39%
Vegetable oil	80%		54%		25%		65%	20%	79%		65%	21%
Fish	67%	33%	78%		22%		65%	32%	63%	28%	66%	31%
Mineral Water	91%		60%		80%		54%	27%	72%			

Legend	Color Code
Traders	
Farmers	
Fishermen/folks	
Uganda	
Sudan	
Middle East	

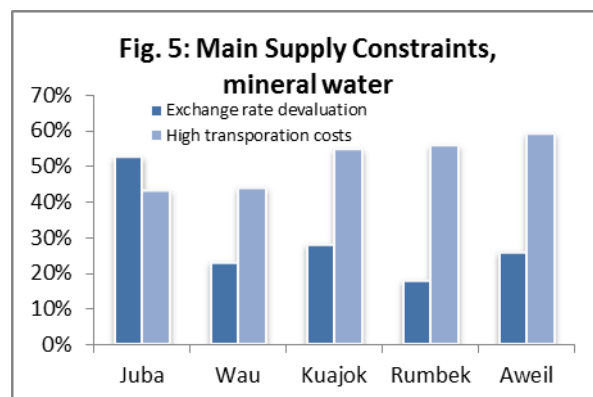
Main Supply Constraints/Challenges (June-July-August) to the markets

Figures 3-7 present the main supply constraints affecting the supply of both locally produced and imported food in the surveyed markets. High transportation costs and low local productive capacity stands out as the main challenges affecting supply of locally produced commodities (sorghum, groundnuts, mineral water and fish).

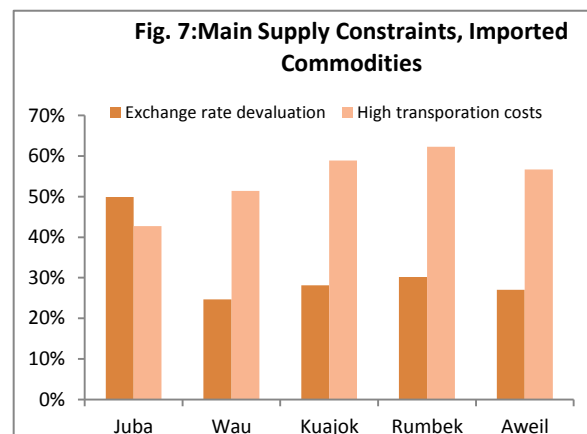
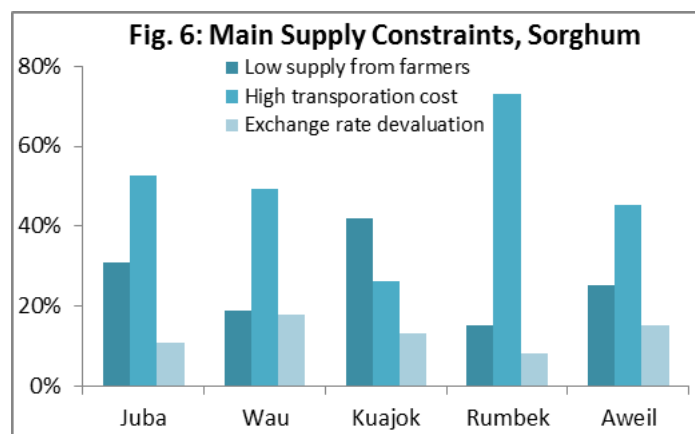
Transportation cost is attributable to high cost of fuel, insecurity, multiple taxation regimes and poor roads. The effect of transport costs are highest in Rumbek compared to all other markets due to the high levels of insecurity that persist in Lakes State.



For imported commodities, the challenges associated with exchange rate devaluation, acute shortage of dollars in the country and high transport costs were identified as the main constraints to trade flows in the markets under review. High transport costs were more pronounced in Wau, Kuajok, Rumbek and Aweil as opposed to Juba where currency devaluation stood out as the major challenge for food imports. The latter could be attributable to the tarmacked Nimule-Juba road.



Most of the materials used for processing and packaging mineral water were imported. Given that food price inflation in the country is positively correlated with SSP depreciation, the high dependence on imports and low local agricultural productivity means that the volatility in food prices cannot be reduced unless the exchange rate regime is stabilized.



Appendix I: Units of measurements at the market

The table below provides the supply/demand dynamics for the surveyed commodities in addition to documenting corresponding units of measurements in the four markets. Further recommendations have been made on that commodities that should be subjected measurement standardization exercise and the units of measurements that should revised accordingly in the price collection form.

Commodity	Market Units of Measurements
Beans	<ul style="list-style-type: none"> Yellow Janjaro/beans is the most preferred as opposed to the brown one and is more expensive. Sold mostly in malwa.
Charcoal	<ul style="list-style-type: none"> Sold in small basins (less than a malwa), tins and malwa, but not in kg. Standardization exercise necessary and the price collection form should be reviewed accordingly
Cooking oil	<ul style="list-style-type: none"> Sold in 500 ml soda bottles.
Cowpea	<ul style="list-style-type: none"> Is locally grown and seasonally available. Sold in 0.5/1 kg cups
Dry cassava	<ul style="list-style-type: none"> Grown in Wullu but also supplied from Greater Equatoria. Sold mainly in basins equivalent to 3 malwas=12.5 kgs.
Firewood	<ul style="list-style-type: none"> Sold in small/medium/big bundles
Fish	<ul style="list-style-type: none"> Fishermen prefer to sell fresh fish rather than dried especially during the shortage periods. During peak periods; most fish are dried. Dry fish more expensive than fresh fish. Fresh tilapia is common in most markets but dry tilapia is not very common Fresh fish: Depending on size, it is sold in bundles if small but whole if big. Fresh fish is sold in heaps/pieces of different size and are not weighted by traders Dry fish sold in short cut bundles. The differentiation between dry and fresh fish in the price collection form should be maintained but differentiation by species is not important as prices do not vary much. This should be corrected in the form.
Fresh milk	<ul style="list-style-type: none"> During the dry season, cattle migrate to low lands to get pasture and water and also to avoid cattle raiding thus limiting supply of milk and prices tend to increase. Availability of powdered milk is more common in most urban areas than fresh milk. During the wet season, the cattle come back to highlands/ residential areas thus improving access to milk. However during 2015 rainy season, there were not enough rains and no flooding in the lowlands and livestock were yet to return to highlands at the time of the survey in most areas thus limiting supply of milk to towns resulting in high prices of fresh milk. Farmers are also not able to move long distances to supply milk due to insecurity, especially in Lakes State. Fresh milk is sold in half liter cup/ water bottles. There is need to include powder milk in the price monitoring form as it's the most commonly consumed in urban areas
Goat/ Sheep	<ul style="list-style-type: none"> Male medium quality goat/sheep commonly sold as they are mostly preferred for meat. Selling of productive female goats/ sheep is very rare Grading depends on size and body condition There is need to develop standardized grading tool
Ground nuts	<ul style="list-style-type: none"> Shelled groundnuts very uncommon. Unshelled groundnuts sold in Malwas/basins. Malwa the most common unit of measurement for the unshelled rather than 1kg Need to change the unit in the price collection form to reflect malwa rather than kg for unshelled ground nuts
Honey	<ul style="list-style-type: none"> Produced mainly from Wuulu County There is need to monitor the price of this commodity as it forms an integral livelihood source in some communities



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Irish potato	<ul style="list-style-type: none"> Imported from Uganda. Mainly available in Rumbek Centre and Juba markets. Sold in heaps in small plastic bowl equivalent to 1kg
Maize flour	<ul style="list-style-type: none"> Sold commonly in 1 kg for locally milled flour but also in 2kg packets for imported flour.
Okra dry	<ul style="list-style-type: none"> Chopped, dried and sold in small tins (1kg), bundles and heaps. Fresh ones are sold whole in bundles during the harvest while the dry ones are sold during the dry season. 40 small pieces=1kg; sold in bundles/ malwa/ pieces.
Paraffin	<ul style="list-style-type: none"> Not sold, very rare as most households use batter lamp/touch for lighting. It is recommended that price of battery dry cells be included in monitoring instead/ in addition to paraffin
Petrol	<ul style="list-style-type: none"> No functioning petrol station was open to the general public in the markets during the duration of the study except in Juba and Nimule. This is because most petrol stations closed business in response to price controls policies introduced by the government. This has resulted in biting shortage of fuel in the country and high prices, disrupting transportation. Petrol/ diesel is supplied from Juba in drums and sold by the road side in 750ml/ 1.5 liter water bottles/ 20 liter Jerri cans.
Rice	<ul style="list-style-type: none"> East Africa rice particularly from Uganda the most common. Mostly sold in 1kg/malwa
Sesame	<ul style="list-style-type: none"> Sold in cups equivalent to 0.5 kg/ 1kg
Sugar	<ul style="list-style-type: none"> The white sugar (from Khartoum) is more expensive than the brown one (from Uganda) Sold mainly in kg.
Hiring cost:	<ul style="list-style-type: none"> This is common during the planting season. Oxen hiring is more prevalent in remote rural areas while tractor hiring is mainly around main towns, predominantly in Renk, Wau and Equatoria. Hiring cost depends on fuel cost. Oxen traction and mechanized traction should be removed from the price monitoring form as they are household survey questions and not market level questions. They could be included in FSNMS/ crop assessment tools
Veg oil/ lulu oil	<ul style="list-style-type: none"> Sold in half liter bottles
White sorghum/ maize	<ul style="list-style-type: none"> White sorghum is rare in the market; used to been imported from Sudan. Not very preferred by local consumers. WFP distributed sorghum sold in most the markets. Mostly sold in malwa



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Appendix II: Commodity tables

Sorghum Flour						
Source	Juba	Wau	Kuajok	Rumbek	Aweil	All Towns
Famers	22%	21%	13%	22%	2%	16%
Local Traders	65%	60%	78%	49%	85%	67%
Uganda	7%	3%	1%	10%	1%	4%
Kenya	4%	3%	0%	0%	0%	1%
Sudan	2%	10%	8%	3%	12%	7%
Ethiopia	0%	3%	0%	0%	0%	1%
Supply Constraints/ Challenges						
Low supply from farmers	31%	19%	42%	15%	25%	26%
Border Closure	4%	3%	5%	0%	10%	4%
Exchange rate related problems/ devaluation+ lack of dollars	11%	18%	13%	8%	15%	13%
Insecurity	15%	18%	3%	34%	10%	16%
High cost of transportation	18%	18%	13%	15%	20%	17%
Poor Roads	20%	13%	11%	23%	15%	16%
Lack of storage facilities	2%	7%	3%	1%	5%	4%
Low profit margin	0%	3%	11%	2%	0%	3%
Supply Condition						
Low	12%	40%	52%	53%	71%	46%
Normal	82%	40%	18%	25%	0%	31%
High	6%	20%	30%	22%	27%	23%
Price/ Unit of Measurement						
1 malwa (3.5kg)	40	33	38	36	35	
10kg bag	62		14			
1kg		11	30	30		
25kg bag			424	320		
50kg bag			420	350		



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Ground nuts

Source	Juba	Wau	Kuajok	Rumbek	Aweil	All Towns
Famers	88%	62%	67%	87%	91%	79%
Local Traders	12%	15%	14%	0%	9%	10%
Uganda	0%	0%	8%	3%	0%	2%
Kenya	0%	0%	4%	0%	0%	1%
Sudan	0%	23%	8%	10%	0%	8%

Supply Constraints/ Challenges

Low supply from farmers	46%	25%	59%	32%	28%	38%
Border Closure	0%	3%	0%	2%	1%	1%
Exchange rate related problems/ devaluation+ lack of dollars	8%	15%	2%	7%	3%	7%
Insecurity	0%	10%	3%	31%	0%	9%
High cost of transportation	23%	18%	16%	4%	38%	20%
Poor Roads	14%	13%	12%	20%	9%	13%
Lack of storage facilities	0%	8%	2%	1%	22%	6%
Low profit margin	8%	10%	6%	4%	0%	6%

Supply Condition

Low	48%	42%	58%	42%	73%	53%
Normal	25%	26%	16%	34%	14%	23%
High	27%	32%	25%	25%	14%	24%

Price/ Unit of Measurement

30 kg bag			707		
10kg bag	185				
1kg	8			11	12
1 malwa (3.5kg)		29	37	30	28
1 kg bowl/cup			12		
1 Basin				92	
Small tins/cup 1/2kg				4	



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Beans

Source	Juba	Wau	Kuajok	Rumbek	Aweil	All Towns
Famers	5%	4%	3%	2%	2%	3%
Traders	7%	4%	10%	4%	2%	6%
Uganda	75%	53%	69%	83%	63%	69%
Kenya	6%	4%	10%	10%	12%	8%
Sudan	6%	34%	8%	2%	21%	14%

Supply Constraints/ Challenges

Low supply from farmers	9%	7%	4%	6%	0%	5%
Border Closure	0%	4%	1%	1%	2%	1%
Exchange rate related problems/ devaluation+ lack of dollars	42%	32%	29%	30%	29%	32%
Insecurity	8%	16%	7%	18%	12%	12%
High cost of transportation	19%	14%	23%	21%	21%	20%
Poor Roads	17%	13%	33%	22%	29%	23%
Lack of storage facilities	0%	7%	0%	0%	6%	3%
Low profit margin	6%	7%	3%	3%	0%	4%

Price/ Unit of Measurement

1kg			30	25	24	31
50kg bag				918	802	

Sugar

Source	Juba	Wau	Kuajok	Rumbek	Aweil	All Towns
Traders	20%	6%	14%	11%	5%	11%
Uganda	60%	43%	55%	84%	39%	56%
Kenya	7%	6%	8%	2%	6%	6%
Sudan	13%	42%	24%	2%	48%	26%
Ethiopia/Egypt/Saudi Arabia	0%	3%	0%	2%	2%	1%

Supply Constraints/ Challenges

Border Closure	15%	6%	5%	1%	5%	6%
Exchange rate related problems/ devaluation+ lack of dollars	50%	21%	28%	32%	26%	32%
Insecurity	12%	17%	4%	16%	15%	13%
High cost of transportation	0%	17%	24%	25%	18%	17%
Poor Roads	23%	22%	34%	21%	25%	25%
Lack of storage facilities	0%	10%	2%	0%	11%	5%
Low profit margin	0%	8%	2%	6%	0%	3%

Supply Condition

Low	62%	33%	47%	40%	41%	45%
Normal	38%	39%	21%	25%	49%	34%
High	0%	28%	32%	35%	11%	21%

Price/ Unit of Measurement

1kg	13.00	15.78	18.36	14.52	15.09	15.82
50kg bag	446.25	698.33	698.75	641.67	672.50	641.19
25kg bag				326.07		326.07



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Fish

Source	Juba	Wau	Kuajok	Rumbek	Aweil	All Towns
Fishermen	67%	78%	32%	63%	66%	61%
Local Traders	33%	22%	65%	28%	31%	36%
Uganda	0%	0%	0%	9%	0%	2%
Sudan	0%	0%	3%	1%	3%	1%
Supply Constraints/ Challenges						
Low supply from fishermen	54%	15%	23%	18%	25%	27%
Border Closure	0%	4%	5%	3%	2%	3%
Exchange rate related problems/ devaluation+ lack of dollars	7%	6%	2%	10%	5%	6%
Insecurity	0%	21%	9%	30%	14%	15%
High cost of transportation	14%	19%	16%	13%	20%	16%
Poor Roads	11%	22%	31%	17%	25%	21%
Lack of storage facilities	7%	2%	3%	3%	8%	5%
Low profit margin	7%	11%	9%	7%	3%	7%
Supply Condition						
Low	11%	32%	41%	38%	72%	39%
Normal	22%	29%	9%	28%	14%	21%
High	67%	39%	50%	34%	14%	41%

Maize Flour

Source	Juba	Wau	Kuajok	Rumbek	Aweil	All Towns
Farmers	19%	6%	6%	11%	2%	9%
Traders	0%	10%	17%	2%	3%	6%
Uganda	81%	65%	70%	84%	67%	73%
Kenya	0%	6%	0%	2%	9%	3%
Sudan	0%	13%	8%	2%	12%	7%
Ethiopia	0%	0%	0%	0%	7%	1%
Supply Constraints/ Challenges						
Low supply from farmers	0%	8%	5%	6%	1%	4%
Border Closure	0%	3%	11%	0%	6%	4%
Exchange rate related problems/ devaluation+ lack of dollars	49%	27%	26%	29%	28%	32%
Insecurity	18%	12%	8%	16%	12%	13%
High cost of transportation	27%	18%	22%	21%	19%	22%
Poor Roads	4%	18%	27%	23%	22%	19%
Lack of storage facilities	2%	4%	0%	1%	12%	4%
Low profit margin	0%	9%	1%	5%	0%	3%
Supply Condition						
Low	52%	51%	50%	44%	67%	53%
Normal	39%	31%	16%	28%	21%	27%
High	9%	18%	34%	28%	12%	20%
Price/ Unit of Measurement						
1 malwa (3.5kg)	30	32		38	35	34
10kg bag	69			83		76
1kg	14	13	14	13	14	14
25kg bag	290	230	211	175	290	239
50kg bag		370	383	375	610	434



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Rice

Source	Juba	Wau	Kuajok	Rumbek	Aweil	All Towns
Traders	5%	6%	11%	11%	3%	7%
Uganda	70%	36%	67%	72%	60%	61%
Kenya	0%	9%	5%	6%	5%	5%
Sudan	0%	30%	18%	8%	29%	17%
Dubai/India/Pakistan/Saudi Arabia/Thailand Egypt	25%	20%	0%	3%	2%	10%
Supply Constraints/ Challenges						
Low supply from farmers	0%	14%	6%	4%	0%	5%
Border Closure	6%	4%	8%	1%	10%	6%
Exchange rate related problems/ devaluation+ lack of dollars	64%	18%	28%	26%	30%	33%
Insecurity	0%	13%	8%	19%	12%	10%
High cost of transportation	21%	18%	23%	20%	22%	21%
Poor Roads	9%	20%	25%	25%	18%	19%
Lack of storage facilities	0%	4%	0%	1%	8%	3%
Low profit margin	0%	11%	3%	3%	0%	3%
Supply Condition						
Low	52%	52%	44%	42%	54%	49%
Normal	24%	32%	31%	24%	36%	29%
High	24%	16%	25%	33%	10%	22%

Wheat Flour

Source	Juba	Wau	Kuajok	Rumbek	Aweil	All Towns
Traders	7%	9%	16%	12%	3%	9%
Uganda	85%	14%	51%	86%	14%	50%
Kenya	0%	0%	0%	2%	0%	0%
Sudan	8%	77%	33%	0%	83%	40%
Supply Constraints/ Challenges						
Border Closure	3%	10%	8%	0%	11%	6%
Exchange rate related problems/ devaluation+ lack of dollars	53%	26%	30%	30%	27%	33%
Insecurity	3%	16%	13%	17%	10%	12%
High cost of transportation	39%	19%	13%	24%	19%	23%
Poor Roads	3%	18%	29%	23%	28%	20%
Lack of storage facilities	0%	8%	1%	1%	6%	3%
Low profit margin	0%	4%	6%	4%	0%	3%
Supply Condition						
Low	79%	50%	55%	46%	58%	58%
Normal	11%	38%	13%	22%	33%	23%
High	11%	12%	33%	33%	8%	19%
1 malwa (3.5kg)		58			40	
1kg	10	16	17	19	15	
25kg bag	320		353	400	350	
50kg bag		720	740	750	650	



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Veg oil

Source	Juba	Wau	Kuajok	Rumbek	Aweil	All Towns
Traders	15%	8%	11%	11%	8%	11%
Uganda	80%	54%	65%	79%	65%	69%
Kenya	0%	0%	4%	4%	2%	2%
Sudan	0%	25%	20%	4%	21%	14%
Ethiopia/ Egypt/Saudi Arabia	5%	13%	0%	2%	4%	5%
Supply Constraints/ Challenges						
Border Closure	0%	2%	8%	1%	3%	3%
Exchange rate related problems/ devaluation+ lack of dollars	42%	24%	28%	34%	22%	30%
Insecurity	16%	18%	8%	17%	13%	14%
High cost of transportation	25%	16%	26%	21%	18%	21%
Poor Roads	13%	24%	27%	24%	27%	23%
Lack of storage facilities	2%	7%	1%	1%	14%	5%
Low profit margin	1%	9%	2%	2%	2%	3%
Supply Condition						
Low	59%	42%	48%	42%	36%	45%
Normal	31%	43%	17%	22%	28%	28%
High	10%	15%	35%	36%	36%	27%
Price/ Unit of Measurement						
1/2litres bottle		10	14	13	13	
1litre	25	14	22	27	24	
20Litre Jerry can	219	359	336	363	390	

Water

Source	Juba	Wau	Kuajok	Rumbek	Aweil	All Towns
Traders/ Factory	91%	60%	80%	54%	77%	72%
Uganda	2%	10%	15%	27%	13%	13%
Sudan	7%	30%	5%	19%	10%	14%
Supply Constraints/ Challenges						
Low supply	4%	8%	1%	8%	2%	5%
Border Closure	0%	0%	4%	2%	2%	2%
Exchange rate related problems/ devaluation+ lack of dollars	53%	23%	28%	18%	26%	30%
Insecurity	12%	22%	6%	14%	7%	12%
High cost of transportation	14%	11%	24%	16%	28%	18%
Poor Roads	18%	11%	25%	26%	24%	21%
Lack of storage facilities	0%	14%	1%	6%	11%	7%
Low profit margin	0%	11%	10%	9%	0%	6%
Supply Condition						
Low	38.9%	11.1%	36.2%	19.6%	43.8%	30%
Normal	56.2%	77.8%	37.7%	52.9%	56.3%	56%
High	4.9%	11.1%	26.1%	27.5%	0.0%	14%
Price/ Unit of Measurement						
0.5litre bottle	1.00	2.11	3.00	4.80	2.67	
1 Liter		3.25	3.86	5.43	5.80	
2 Liter bottle						
20Litre Jerri can	16.00		50.00	50.00		
750ml bottle			3.00	3.00	4.00	
750ml dozen Carton		60.00	53.46	52.83		



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