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Reviving Markets and Market-Linked Agriculture in South Sudan: Jobs, Recovery, and Peacebuilding in Urban South Sudan – Technical Report III

Jan von der Goltz et al.

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Jobs

REVIVING MARKETS AND MARKET-LINKED AGRICULTURE IN SOUTH SUDAN

JOBS, RECOVERY, AND PEACEBUILDING IN URBAN SOUTH SUDAN – TECHNICAL REPORT III

Jan von der Goltz et al.

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Table of Contents

I. Introduction 11

II. Data and methods 14

III. The state of markets and agriculture value chains in the towns of South Sudan 16

1. Conflict has disrupted agricultural production, transformation, and trade networks 16
2. What kind of products and activities are in the markets, and how is market activity developing? 19
3. Who trades in the market, and what kind of a job is working in the market? 27
4. What are the key obstacles market traders face in their business? 38
5. What is the level of local market integration for agriculture products? 51

IV. Policy implications 60

List of Figures

Figure 1 Cereal production deficits and surpluses by region (FAO/WFP) 17
Figure 2 Goods and services offered by market traders 20
Figure 3 Goods and services offered, by town 21
Figure 4 Change in market activity over year preceding the survey 26
Figure 5 Change in market activity over year preceding survey, by town 27
Figure 6 Goods and services offered by women and men in the markets 29
Figure 7 Number of workers from outside the owner's household employed at the market stall 32
Figure 8 Daily sales volume, by activity 35
Figure 9 Daily sales volume at stalls trading agricultural products 35
Figure 10 Importance of market activity to traders' household incomes 36
Figure 11 Perceived obstacles to running market activities 39
Figure 12 Market traders' expectations for the coming three years 39
Figure 13 Number of checkpoints at which traders must make payments on the way to the market 42
Figure 14 Expected ways of funding a (hypothetical) large purchase 43
Figure 15 Fees paid for market activity, by town and revenue 44
Figure 16 Number of vendors in the market who offer the same goods and services as the respondent, by activity 45
Figure 17 Number of vendors in the market who offer the same goods and services as the respondent, by town and activity 45
Figure 18 Market traders' main consideration in setting prices 47
Figure 19 Types of customers market traders sell to 48
Figure 20 Types of customers market traders sell to, by town 49
Figure 21 Role of UN as an important customer for food traders in the market 50
Figure 22 Share of market traders dealing in agricultural products who transport goods to the market from out of town 51
Figure 23 Share of market traders dealing in agricultural products who transport goods to the market, by town 52

Figure 24 Trader views on the advantages of sourcing locally or from Juba or abroad 58

List of Tables

Table 1 Market survey locations 15
Table 2 Key informant interviews conducted 16
Table 3 Common market activities 20
Table 4 Agricultural products offered in the market 22
Table 5 Education levels of market traders 28
Table 6 Nationality of market traders 30
Table 7 Daily wages of market helpers (SSP) 33
Table 8 Daily revenue of market stalls (SSP) 34
Table 9 Most frequently cited key business obstacles, by town 39
Table 10 Agriculture products aggregators trade 53
Table 11 Share of stalls that offer imported agricultural products in the market 56
Table 12 Sourcing of agricultural goods 57

KEY MESSAGES

This report is one of a set of studies on urban jobs outcomes. This study is one of a set of four reports covering different aspects of jobs in urban South Sudan. Readers may refer to the respective companion reports on the macroeconomic environment for jobs (World Bank, 2020b), markets and market-linked agriculture (World Bank, 2020c), and jobs in businesses and NGOs (World Bank, 2020d). A synthesis report summarizes and contrasts findings from all four studies (World Bank, 2020e).

Summary

Insecurity has disrupted all elements of the markets that South Sudanese rely on for their livelihoods, from agricultural production to the transformation of produce, trade networks, and demand

Agriculture provides most livelihoods, and there is high potential for raising production in a diverse range of crops. Agriculture provides the main source of income for nearly nine in ten rural households, and one in two urban households. Subsistence agriculture is the norm, and is the primary activity of five in six urban households active in the sector. Fewer make most income from market-linked agriculture (10%) or processing (6%). The main staples vary among livelihood zones, though sorghum is dominant, followed by maize, rice, and cassava in different parts of the country. South Sudan historically has produced and exported a rich range of crops, including oil seeds, nuts, groundnuts, tree crops, vegetables, fruit, as well as coffee, honey, and tea.

Years of conflict have taken a dire toll on agricultural production. Agricultural production has plummeted as many farmers have fled their villages for towns, where they have either given up farming or are competing for scarce land in safe areas around towns. Among those who have stayed in rural areas, many have been unable to access enough land to go much beyond subsistence farming, and are afraid to travel to town for inputs and sales. This effect has been felt throughout the country, and has not spared South Sudan's 'bread baskets' around Renk and Yambio. While some of this effect has begun to reverse since 2018, conflict remains a potent force in reducing farmers from market-linked producers to subsistence farmers, exposing them to greater climate risk as they farm more marginal land, and ultimately, creating the conditions for a heightened risk of famine. In consequence, the cereal production deficit remained at 37% of consumption needs in 2020.

Markets have been profoundly disrupted, and value chains have disintegrated. Markets for agricultural products have disintegrated amid the drastic decline in production, insecurity on the roads, loss of assets, and a breakdown in local market demand. For years, it has been dangerous and expensive for traders, aggregators, and farmers to take goods to market. Farmers, aggregators, processors, and traders alike have lost their tools and working capital, even while conflict has destroyed the livelihoods of households, and eroded market demand. In consequence, those who rely on market-linked agriculture for a living face an exceedingly difficult environment in which costs and risks are high, and demand is depressed.

Market activity is recovering, but the range of goods and services remains constrained by the effects of conflict, and food system value chains are few and short

In 2019, market activity was recovering during the period of relative stability following the signing of the Peace Agreement in September 2018. Across five towns surveyed, market traders agree that activity and supply in the markets have increased strongly over the year preceding an October 2019 survey. Those in Malakal and Rumbek are particularly likely to feel that there are now more sellers and products. However, over the past years, displacement, looting, danger on the road and the destruction of markets have put many traders out of business or forced them to reduce or suspend their activities. Today, more than two in five traders (44%) have not been active for more than a year.

Market traders offer a notably narrow range of goods and services. Most market stalls sell untransformed or transformed agricultural products (52%) or re-sell consumer commodities (45%). There are far fewer artisans (9%) and service providers (12%). Market traders offer a notably narrow range of goods and services. For instance, consumer goods sold are mostly clothes, shoes, soap, bikes, cigarettes, and cellphones. Similarly, most stalls providing services are active as barbers, offer phone charging, or transport services.

After years of conflict and disruption, there is little diversity in agricultural products traded, and the food system value chains are few and short. Stalls that sell unprocessed agriculture products are most likely to focus on a few types of vegetables and grains. Flour, juice, and baked goods are the most prominent locally transformed products sold. The main food sector value chains are rudimentary; most involve a single processing step after harvest, for instance in preparing groundnut paste, and little packaging or transport. A richer range of food products and value chains survive (for instance, in dairy processing) but as niche activities with few jobs and little output.

The impoverished range of products reflects the conflict's impact on cultivation, livestock ownership, and the purchasing power of customers. Conflict has cut production of key subsistence crops and undermined food security, but it has also reduced the range of crops grown. Diversity has decreased as it has been difficult to obtain seeds for less common crops, conflict has destroyed orchards, and made it impossible to access land suitable to some crops. Livestock value chains provide few jobs in the market despite South Sudan's enormous herds, since many farmers fear keeping livestock in an insecure environment, and have lost animals to disease and theft. Finally, cash-strapped households in town have few resources for enriching their diets, and producers struggling to stay afloat can ill afford to invest in crops that may take time to mature.

Although most market activities are small-time and profits are slim, most market traders rely on their activities for most of their household's income, and markets offer significant numbers of jobs

Market traders tend to be fairly well-educated and old enough to have accumulated some savings. About nine in ten stall-owners (89%) work at their own stalls, while a few others maintain a stall as an investment. About two-thirds of owners are men. Women are much more likely to trade in untransformed agricultural products, and men in consumer goods. Market traders are typically in their mid-twenties or thirties – an age when workers have had the opportunity to accumulate some savings. Older stall owners also have higher revenues. While there are some illiterate traders, half have at least completed secondary school (35%) or have higher education (14%).

About half of those who trade consumer commodities are foreigners, while three in four those who sell foodstuffs are South Sudanese farmers, traders, and processors. South Sudanese own three out of four market stalls that sell agricultural goods, and a bit less than half of those that re-sell consumer goods. Those active in food sector value chains include farmers who typically sell small surpluses in the market, professional market traders who buy either from farmers or larger traders, and processors who may mix own production and purchased inputs.

Every three market traders employ between them two workers from outside their families, with helpers paid at about the going rate for unskilled labor. About one in three stalls (31%) employ workers from outside the owner's family, in addition to family helpers. Those who hire any workers have two helpers at the median, so that on average, any three market stalls provide jobs for two workers. Those who sell untransformed agricultural products are less likely to hire than other types of stalls, in line with lower revenues among these traders. Workers in the market can expect to be paid about 600 South Sudanese Pound (SSP) (about US$2) per day, akin to the going rate for unskilled workers.

While revenues are meaningful relative to local wages, sales are very modest, and few traders sell anywhere close to what they could offer. At the median, vendors of agricultural products expect to earn about 3,000 SSP (10 USD) during a day in the market, with higher revenues among those who sell consumer goods (about SSP 5,000). While this is about six times the typical daily wage for unskilled workers, it reflects modest sales. The median revenue corresponds to only about 13 kilogram of wheat flour in the Juba retail market, or some 17 bundles of leafy greens in Malakal. In line with modest revenue, traders are likely to say that on a typical day, they have between five and 20 customers and sell much less than what they could offer. Among those who trade in agriculture goods or offer services, about one in four say they typically sell nothing or very little, and more than two thirds say that they sell less than half.

Most market traders rely on their market job for most of their household's livelihood, but profit margins are slim, and processors in particular consider their activity a last resort. For six out of seven market traders (85%), running their market stall is the only or the most important income generating activity of their families, and nearly all come to the market every day and all year. With much competition and considerable transport costs, traders

and processors alike report that they achieve small profit margins, with examples of 2-4% profit on grain and groundnut transactions for traders, and a few hundred SSP of profit from processing a batch of goods. Processors tend not to view their activities as a substantive, full-time job, and instead feel they are a small-time pursuit to generate some cash income or a last resort to make a living when subsistence agriculture fails.

Market traders consistently stress that a lack of funds, bad and dangerous roads, low demand, and inflation are their worst problems

Across towns, market traders consistently point to lack of funds, bad and dangerous roads, low demand, and inflation as their worst problems. Respondents are both selective and consistent in what they describe as their most challenging problems. The constraints most frequently named are: lack of funding, bad or dangerous roads, lack of customers, and inflation. Across towns, the same four obstacles repeat consistently as the key concerns, with somewhat varying emphasis. Thus, market traders in Malakal most often cite lack of funds, and those in Juba, lack of funds or inflation. Traders in Bor and Rumbek particularly stress bad and dangerous roads, and those in Wau, roads and a lack of customers. Despite the obstacles they faced, traders at survey time in Fall 2019 expressed optimism for the coming three years.

Insecurity and checkpoints obstruct market activity. A majority of market traders who transport goods between villages and towns (66%) and between towns (72%) say they have recently feared for their security on the road. About one in four (24%) who are concerned for their safety say that their worries are so significant that they affect their decision to go travel for business. Dealing with the risk of losing goods on the road is particularly hard for those with little capital to spare. In addition, checkpoints impose significant cost on traders who travel between towns and contribute to high prices. Six out of ten (60%) of those who travel between towns have to pay fees, with a median payment of 5,000 SSP (about 17 USD) at each checkpoint.

Minimal access to finance, high inflation, and significant market fees make it difficult for market traders to make ends meet. In line with low use of credit among businesses, few market traders (11%) say they would finance large purchases by borrowing formally. Rather, most would rely on their own savings (81%), or borrow from family, friends, neighbors, or colleagues (31%). Traders clearly identify inflation as one of the chief constraints to their businesses, and seven in ten (70%) confirmed that in 2019, prices had kept rising despite the increase in competition. Most market traders (93%) pay fees to operate in the market, including those traders with the lowest revenues. A majority say that fees amount to a significant share of revenue, particularly in Juba.

Market traders face constrained demand due to an increase in competition, little diversification, few purchases from UN agencies and NGOs, and low purchasing power among households. Most traders say that they have many direct competitors, as is to be expected given the low degree of diversification. Market traders mostly do business with individual customers, and only a minority deal with businesses, traders, and NGOs. Individual customers are cash-strapped, and with few who can buy wholesale, market traders find it hard to find sufficient demand. Bad and dangerous roads further prevent traders from traveling to sell their goods elsewhere. The UN and aid organizations play some role as buyers, but purchases remain below potential, and even outside of Juba (where their tole is larger), only one in six traders of agricultural products them important customers.

Local agriculture products face competition from imports as insecurity and its consequences makes it difficult for aggregators to operate and farmers to take products to market

Aggregators and farmers continue to take agricultural products to market, but their activity is limited by low supply, danger, high costs, and uncertain rewards. Some aggregators continue to be active, mostly in buying vegetables and fruit, as well as groundnuts and grains. Aggregators can in principle still expect high margins. However, low supply, insecurity and bad roads pose obstacles, and the practice is not ubiquitous, and is often small-time as well as seasonal. Because of limited aggregator activity, many farmers need to transport their goods to market themselves – but insecurity and bad roads are challenges to them, too. In addition, farmers typically have little access to transport and face low market demand, so that they are confronted with both additional cost and uncertain rewards.

With market integration disrupted, imports of basic foodstuffs compete with local products in the market. As insecurity continues to curtail the considerable agricultural potential, imports are competitive in the markets despite the high cost of transporting them from abroad. At the most basic level, insufficient local food production

and limited access to storage facilities open a market for imported agriculture products. In addition, some traders argue that imports can compete on quality and – with too little local aggregation – on convenience of sourcing. As a result, traders source agricultural products opportunistically, and goods in the market are a mix of imports and local crops. For instance, among market traders who sell vegetables, half report that they buy from local producers (49%), and one third say they buy from aggregators who source locally (32%). However, half also say that they buy in markets or wholesale stores in other towns (49%) or in the market town itself (27%).

Policy implications

1. **Better security on the roads and some recovery of primary production are preconditions to restoring market activity and market-linked agriculture.** As long as insecurity remains and food production is precarious, fear and scarcity will continue to weigh heavily on market activity. A tangible improvement can lay the basis of recovery in the markets.
2. **Cash grants can help actors along the value chain to take on some minimal risk, but loans are likely not the way to go.** Small grants can help workers overcome risks related to high cost of transport and inputs, and uncertain demand in the market. They can for instance seek to re-engage aggregators, and allow farmers and processors to gradually increase output and diversity. With few assets, high poverty, and pervasive risk, loans are unlikely to succeed in the short-term.
3. **Support to farmers, processors, and aggregators may be a good way to help the poor improve their jobs outcomes.** Market activity is small-time, in particular among farmers selling surplus and processors. Support to them is likely to be reasonably well-targeted to the poor, though helping aggregators can also unlock crucial opportunities for farmer households.
4. **Farmers' cooperatives could be a lever to restore market-linked agriculture, but capacity and elite capture need close monitoring.** Traditionally strong farmers' cooperatives and now mostly dormant, but could help address many constraints, from improving access to price information, seeds and storage, and reviving aggregation. However, capacity is depleted, and elite capture needs monitoring.
5. **If and when food security improves, market links will benefit from a gradual shift of aid focus to diversification.** This could include support to accessing a broader range of seeds, restoring orchards, providing knowledge lost on processing, and re-stocking small livestock.
6. **Low demand constraints activity, and it is worth looking to support demand.** More reliable demand would raise the incomes of producers and processors, and may encourage small investments. The government can build demand through regular payment of public sector salaries. Aid projects should consider temporary purchase guarantees for aggregators, potentially in coordination with cash transfers programs. UN agencies and NGOs can also look to locally purchase food aid in surplus areas. All such efforts must carefully screen for any unintentional effects on inflation.
7. **Investment needs for roads are enormous, and the priority for early recovery is to reconnect as many producers as possible to markets where they can compete.** Bad roads are a severe constraint on market-linked agriculture. In early recovery, priorities include rural access roads to make it easier for farmers and aggregators to take products to market in food deficit areas, and perhaps, select inter-state projects to connect surplus areas to markets where they can compete with imports.
8. **Lifting fees in the market and at road checkpoints would boost market activity, though it is important not to unintentionally cut the lifelines of security forces.** Fees charged in the market and on the road are a significant burden, including on the smallest traders. Government must ask whether it is justified to levy these charges. However, where they provide income for security forces, stability is at stake.
9. **Macro-economic policy must ease inflation, invest in roads, and right civil service payments to support markets.** Government can ease key obstacles to market by lowering inflation through monetary

discipline, directing some more resource revenue toward rural access roads, and paying civil service salaries regularly and at reasonable levels.

I. Introduction

This report is one of a set of studies on urban jobs outcomes. This study is one of a set of four reports covering different aspects of jobs in urban South Sudan. Readers may refer to the respective companion reports on the macroeconomic environment for jobs (World Bank, 2020b), markets and market-linked agriculture (World Bank, 2020c), and jobs in businesses and NGOs (World Bank, 2020d). A synthesis report summarizes and contrasts findings from all four studies (World Bank, 2020e).

While South Sudan has enormous potential for good jobs on-farm and off-farm, production has broken down amid conflict and climate shocks, and many South Sudanese live in extremely precarious conditions. South Sudan has an enviable agro-climatic endowment, and a rich history of production and export of staple and cash crops (Government of South Sudan, 2016; World Bank, 2019). Yet, after years of conflict and repeated climate shocks, it is far from producing enough food for its population. Latest estimates suggest that nearly seven million South Sudanese are experiencing acute food insecurity, while more than 800,000 children are malnourished. Even under conditions of relative stability, agricultural production remains extremely vulnerable to shocks. The widespread floods towards the end of 2019 led to significant losses of agricultural production in affected areas, while the current desert locust outbreak represents a further threat to food security and livelihoods (WFP, 2019; USAID 2020).

Agriculture is rainfed and most farmers are smallholders in subsistence agriculture, but there is high potential for raising production in a diverse range of crops. Agriculture is essentially rainfed, and production depends strongly on good or bad rains in a given year. The sector is pivotal for jobs. In rural areas, 88% of households primarily rely on agriculture for their incomes. Even in towns, 50% of households depend primarily on the sector. Of urban households active in agriculture, most are primarily engaged in subsistence production (84%), while one in ten make most income from market-linked agriculture (10%), and few from processing (6%). Across its twelve climatic zones, South Sudan historically has produced a rich range of crops, including oil seeds, nuts, groundnuts, tree crops, vegetables, fruit, as well as high-value commodities (like coffee, tea, and honey). (FEWSNET, 2018; World Bank, 2019). The main staples vary among livelihood zones, with a dominant role of sorghum (70% of cereal area – WFP/FAO 2020), as well as maize, rice, and cassava.

Markets have been profoundly disrupted, and value chains have disintegrated. The drastic decline in production, insecurity on the roads, displacement, loss of assets, and a breakdown in local market demand have led markets for agricultural products to disintegrate. For years, it has been dangerous and expensive for traders to transport goods between towns. Aggregators and farmers alike face a real threat to their lives and property when they travel to take goods from villages to town. Farmers, aggregators, processors, and traders have lost their tools and working capital. At the same time, displacement and conflict have destroyed the livelihoods of households, and drastically reduced demand in the markets. As a result, those who hope to make a living in market trading and market-linked agriculture face an exceedingly difficult environment in which cost and risk are high, and demand is depressed.

Despite the weakening of production and food-system value chains, agriculture remains a major source of jobs even in towns. Agriculture is a major source of employment in towns, where about one in three

workers (34%) are primarily active in agriculture, and half of all households primarily rely on agriculture for their livelihood (49%) (World Bank, forthcoming). In addition, there are some linked jobs in services such as transport and processing. While comparisons over time are difficult, it is also evident that the role of agriculture as an employer has increased during the conflict for urban residents, many of whom rely on their own production for sustenance.

Much current jobs support rightly targets a revival of production in agriculture, with a focus on food security. As South Sudan has lived through conflict and food insecurity, much of the support it has received over the past years has come in the form of food aid and other humanitarian assistance. Thus, in 2018, humanitarian assistance accounted for 71% of the $1.6bn in aid received from OECD donors (OECD, 2020). As conditions permit, the appropriate next step is to support a revival of primary production. Hence, much current development support and planning focuses on providing inputs to farmers and resorting their capital and the capacity of their organizations.

However, to devise the next steps in a jobs-led recovery, it is essential to understand the state of markets and agriculture value chains in the towns of South Sudan. In order for market activity to recover, a degree of security must return, and agricultural production needs to be revived. However, while markets in towns have been profoundly disrupted, they have not stopped functioning. Market-linked activities can therefore begin to support a recovery in agriculture. They can gradually provide farmers with an opportunity to sell any surplus, incentives to increase and diversify their production, and revenue to finance small investments. They can also begin to provide jobs for others off-farm. In order to inform support to such a recovery of markets, this study tries to assess the current level of activity in markets, with a focus on agricultural products. It seeks to identify the principal constraints on market activity, and to pinpoint policy actions to promote recovery as greater stability returns.

Box 1: The impact of the Covid-19 pandemic on livelihoods

The Covid-19 pandemic has had an impact on livelihoods through the increased burden of disease, lockdown measures and trade disruptions, as well as macro-fiscal challenges. As of June 28, 2020, the WHO reported nearly 2,000 confirmed cases of Covid-19 in South Sudan; with very low testing capacity, however, the actual burden of disease is almost certainly higher. Between late March and early May 2020, South Sudan imposed lock-down policies similar to those used in many countries to control the spread of Covid-19. Juba was under curfew, and non-essential businesses were closed (while these measures were intended to be nation-wide, anecdotally, other towns experienced less change). Borders have remained open for goods; however, rules on quarantine and turnaround times have slowed imports and raised prices. The prices of staple grains rose precipitously during the early pandemic response, between 20 percent and 40 percent, though inflation may have slowed recently.[1]

The fall in oil prices has put severe pressure on the government's budget. The fall in global oil prices from nearly USD70 a barrel in early January 2020 to about USD40 at time of writing is putting pressure on the Government's budget, with worrisome implications for market demand for goods and services. The fiscal deficit is projected to more than triple, to USD510m, complicating an already difficult budget execution. There is a risk that deficits may be monetized, reigniting inflation. Unrealized spending on capital investment, further arrears in paying civil servants, and slower service delivery are constraining

[1] For instance, Mayai et al. (2020) report that the price of wheat flour rose by 27 percent and the price of rice by 25 percent over the month of March, while the University of Juba measured increases in the price of rice, sorghum, and wheat flour by 40 percent, 27 percent, and 19 percent between February and March.

demand, growth, and jobs. Before the crisis, development assistance and remittances were the first and second-largest foreign currency flows, both exceeding oil revenue. Remittances are likely to have fallen, and it is not known whether NGOs and intergovernmental agencies have fully maintained their activities.

Job activities have been lost due to Covid, especially in non-farm self-employed activities, but as of June 2020, the scale was limited. The World Bank conducted phone surveys in June 2020 to monitor the impact on livelihoods of Covid-19 and measures to contain the pandemic (World Bank 2020f and 2020g).[2] Unless indicated, results in this text box reflect findings from these surveys. One in eight households (13%) reported having lost all income from their main job activity at some point since the onset of the pandemic in early April. Losses were largest among the households that depend primarily on non-farm self-employed business activities. Among these households, one in five have lost all income from their primary activity (20%). Household businesses mostly attributed their losses to a lack of demand (52%) and to usual places of business being closed (49%). Among market traders, one in seven (15%) reported having lost their business, due to travel restrictions due to Covid (33% of those no longer active), but also a broad range of other issues both related and unrelated to the pandemic. Hardly any businesses reported having closed permanently (0.3%), and very few remained temporarily closed as of end-June (5%). However, measuring permanent business closure is difficult, and businesses do report that they know a direct competitor who has gone out of business (47%), and that they considered closing at some point (35%). Activities in Juba seem to have been particularly affected, with higher loss of activity among market traders (31%), and more businesses considering closing (52%) and having competitors who closed (58%).

With widespread poverty and a history of shocks, households are looking to replace lost income opportunities. The real but limited extent to which activities have been lost may be expected, given that households and businesses have lived through many shocks, and that generating income is an immediate question of survival for many households. It is worth recalling that, since 2013, conflict led to the loss of primary activities for 47% of households, that 50% of businesses lost assets and 43% had to temporarily close (World Bank 2020e). While the disruption due to Covid-19 is harmful, it is thus not unheard of. By June 2020, respondents also reported some potential signs of recovery. About one in five households that lost their main activity (22%) reported that they had started a new activity by the time they were surveyed. Similarly, while some traders had stopped their activities, respondents were about twice as likely to say that on balance, the number of traders in the market had increased since April than to say that it had decreased. Both market traders and businesses also reported a modest increase in the number of workers they employed since April, although the rate of hiring has slowed substantially among businesses.

Market activity has reduced, and loss of revenue and income is pervasive. While few job activities have stopped outright, many respondents report losing income from their main activities. This is true of every other main household activity (52%), and of three in five market traders (59%). Traders who offer consumer commodities reported larger declines in revenue (a 35% drop at the median) than food traders

[2] Surveys were implemented between June 9 and July 3, 2020. Respondents included 1,213 mostly urban households, 118 market traders, and 612 businesses. Of the respondent households, 75% live in urban areas. Inherently, the phone survey reflects only households that own a cellphone and live where there is coverage. In the 2019 Youth Jobs Survey, 83 percent of urban households owned a cellphone. Of those that did, 12 percent were in the lowest asset wealth quintile, compared to 45 percent of those that did not. Demographics and labor market outcomes in the tracking survey are similar to those observed in earlier in-person surveys. Thus, household-level results are best interpreted as reflecting outcomes for a large stratum of urban households, with some under-representation of the most marginal.

(a 25% drop), consistent with temporary closures of non-food markets and a loss of consumer disposable income. Among businesses, four in five (81%) reported a decrease, including 59% who say income has declined by half or more.

The main obstacles to business activities reported today remain the same as reported in 2019, but they have tightened. When surveyed in mid-2019, households, market traders, and businesses consistently identified insecurity, bad roads, access to funding, and low demand as their main obstacles. They flagged the same constraints when re-surveyed now, but were likely to say that the constraints had become more difficult to navigate – perhaps with the exception of insecurity, where businesses were more likely to report an improvement (44%) than a deterioration (28%). Surveys in 2019 did not directly ask about inflation as an obstacle, while in 2020, inflation was the third-most frequently cited obstacle among market traders, and the second-most frequently cited among businesses.

Sourcing goods has become more difficult, but is rarely considered a key business obstacle. Border closures and movement restrictions have raised transport cost and slowed down sourcing. Among market traders who source agricultural products from Juba or abroad, 85% say buying supplies has become more difficult since the onset of the pandemic. At the same time, while traders mention poor availability of inputs (8%) and transport cost (13%) as obstacles, they give less prominence to them than to other constraints. Similarly, nearly four in five businesses (79%) say that since April, it has become more difficult to buy goods to re-sell or use as inputs. Yet, transport cost is mentioned less frequently as an obstacle than a lack of funds, high inflation, and low demand, and very few point to poor availability of inputs.

Low market demand already posed an important obstacle before the pandemic, and it has further declined due to the crisis. Even before the pandemic, businesses of all sizes viewed constrained demand for goods and services as a key obstacle. Respondents across all three surveys agree that demand has further tightened. Among the households who were unable at some point during the pandemic to buy staple cereals (46% of all households), most say that this was due to a lack of funds (44%), rather than to traders being out of stock (7%) or price changes (11%). Majorities of market traders explain that they have fewer customers on a typical market day (63%), and that customers buy less (60%). Businesses agree: most (73%) say that demand for their products has declined, and half (52%) say that it has dropped by half or more.

II. Data and methods

This report is based on a small-sample survey of market traders and extensive qualitative data collection, both designed to assess market activity and market-linked agriculture. To assess activity in markets and in food system value chains, we commissioned a small-sample survey of market traders, as well as qualitative work to shed further light. Both data collection efforts were designed to update prior World Bank assessments (for instance, a 2017 study of traders), and to close knowledge gaps. For instance, the survey instruments and discussion guides included sets of questions that sought to explore sourcing of food products, as well as market demand and purchases by aid agencies.

The survey collects data from 540 market traders in five major towns. The survey covered five major towns: Bor, Juba, Malakal, Rumbek, and Wau. Data was collected in September 2019. The survey sample is small, with 108 surveys collected in each town. Where there are several major markets in a town, the sample was split equally between them (Table 1). Respondents were selected by a simple random

sampling approach. The survey was conducted with owners of market stalls (in 89% of cases), or if the owner was not present, with workers who were responsible for at least two out of the following three activities: (i) produce or buy goods sold or provide services;(ii) buy inputs or tools, or pay fees, services, or wages; (iii) making other decisions on running the market stall. We use the following terms for respondents: 'market traders' for all who manage a market stall, whether they are the owner or a hired worker; 'responsible workers' for workers who manage stalls; and 'traders' for businesspeople who buy and sell beyond a single market.

Table 1 Market survey locations

Location	Market	Number or surveys
Bor	*Bor Market*	108
Juba	*Gudele Market*	36
	Konyo konyo	36
	Suk Libya	36
Malakal	*Malakal Market*	108
Rumbek	*Rumbek Market (agricultural products)*	54
	Rumbek Market (commodities)	54
Wau	*Suk Hajar*	36
	Suk Jou	36
	Suk Wau	36

Small sample size and the absence of a full listing of market stalls means the survey needs to be interpreted carefully. Because of funding limitations, it was not possible to conduct a listing of market stalls. As a result, we show unweighted statistics. These must be taken with caution where there is an expectation of significant heterogeneity between markets and towns. At the same time, small sample size limits our ability to confidently disaggregate results by town, so that our ability to explore heterogeneity is less than one would desire.

Interviews were carried out with farmers, market participants, and key informants in nine towns, including those covered by the market survey. Qualitative data collection was carried out in nine towns: Aweil, Bor, Juba, Malakal, Renk, Rumbek, Torit, Wau, and Yambio. In each town, researchers conducted key informant interviews (KIIs) and focus group discussions (FGDs) with local administrators and agricultural value chains stakeholders, for a total of 63 interviews (Table 2). KII respondents were selected based on their knowledge of the subject matter and awareness of the local context. They were identified through consultations with local authorities and stakeholders. FGD participants were chosen based on their involvement in activities of interest. Respondents were selected through chain-referrals from previous respondents ('snowball' sampling), contacts provided by key informants, or by visiting areas recommended by key informants. In other cases, respondents were recruited directly by researchers in the market.[3]

[3] Additional materials and information are available from the team upon request.

Table 2 Key informant interviews conducted

Respondent type	Interview/discussion type
Local Authority (Payam or paramount chiefs)	KII
Trader's Association	KII
County Agricultural Department (CAD)	KII
Male Farmers	FGD
Female Farmers	FGD
Traders	FGD
Processors[4]	FGD

Qualitative data collection encountered some obstacles typical of the method that should be kept in mind in interpreting findings. Some caveats are in order to provide context for how qualitative information should be interpreted. One, respondents were selected carefully to represent a range of perspectives among South Sudanese engaged in the activities of interest. However, since selection was purposive and non-random, it can ultimately not be assumed that the views are representative of the population active in the activities. Secondly, in some instances, researchers met some obstacles in finding appropriate respondents. In Juba, Malakal, Rumbek, and Torit, it proved difficult to recruit farmer respondents from the outskirts of town. In some instances, it was not possible to hold focus group discussion with traders and processors on the weekend, as is preferable given their busy daily activities. Respondents gave less information in these groups. Finally, researchers felt that, in some instances, respondents may have been influenced by awareness that the study would inform World Bank policy.

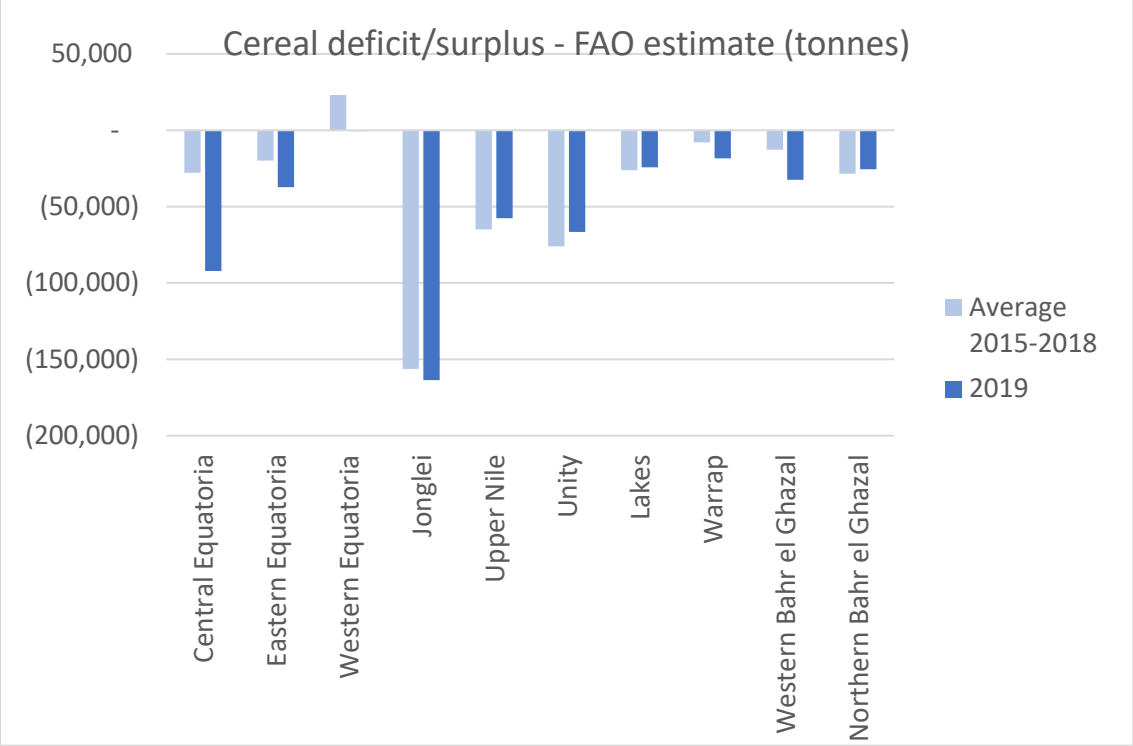
III. The state of markets and agriculture value chains in the towns of South Sudan

1. Conflict has disrupted agricultural production, transformation, and trade networks

South Sudan faces the challenge of restarting agriculture markets after conflict has disrupted production, disconnected trader and aggregator networks, and diminished market demand. Conflict has taken a heavy toll on all the elements of a basic functioning market. Agricultural production has plummeted, and transformation of products has become rarer. Trade has become dangerous, costly, and risky, as has aggregation of agricultural products as well as last-mile delivery of inputs. Further, conflict has raised poverty, and with many households barely able to make a living, demand in the markets has plummeted.

[4] Processor focus groups were carried out either with only women or men engaged in processing. This was thought best, given the difficulty women face in speaking freely in mixed groups. However, the approach does limit the perspective on processing activities, since it was not feasible to conduct two groups in each town,

Figure 1 Cereal production deficits and surpluses by region (FAO/WFP)



Source: FAO/WFP, 2020

"This soil does not refuse anything. The only problem is that people left their farms where they were cultivating because of the conflict and come to town." *Key informant, Yambio*

Conflict has led to reduced production as farmers have fled their villages for towns, and abandoned plots farther afield. In 2019, all former states experienced a cereal deficit; in some cases, a dramatic one (Figure 1). A crucial driver behind declining agricultural production is the displacement of farmers into towns, PoC camps (as well as out of the country), and the inaccessibility of outlying farm areas. Some of those who had to leave villages have abandoned farming altogether – a processor in Bor explains: "I was a farmer before, and I left farming because of insecurity. If you go for farming, you can be killed by anyone because killers move randomly in the forest, so I came to the town to do this [processing] business for my children."[5] Others continue as farmers, but now compete over scarce land in town. Another resident of Bor still active in faming discusses the limitations: "the types of gardens we have now are too small, unlike what they used to be before insecurity squeezed people to live in congested areas. Now most of us are doing farming around … Bor town here, and [plots] are equivalent to a quarter of a feddan."[6] (A feddan is a

[5] Processor FGD, Bor.

[6] Male farmer FGD, Bor Compare also: Trader FGD, Bor "Most of the time people do cultivation at home as you know the issue of insecurity has limited people to live in towns." Female Farmer FGD, Bor "Our land is in the village which we left during the conflict" "I am a farmer, I used to cultivate since I grew up but because of insecurity which made everyone leave the town for safer zones (areas); I begged for a small portion of land from my neighbor here." Local Authority KII, Bor "The conflict of 2013 has discouraged farmers as a majority has shifted from the village to the town." Male farmer FGD, Bor "I used to cultivate one feddan or two before when we were in Ajangnooi, East of Bor town like I said before; but now with the insecurity which has confined people to the town, you can just know that people can't do a lot of farming on plots of 20 metres by 25 metres, and so we just plant only vegetables inside our compounds."

unit of area equivalent to slightly more than an acre, or 4,200 square meters.) Similar observations were shared by respondents in towns throughout South Sudan[7], including in those with as different a history during the conflict as Aweil[8], Juba[9], and Malakal[10].

Even South Sudan's 'bread baskets' in the prime growing areas around the towns of Renk and Yambio have been affected by insecurity. Displacement and insecurity have affected production and food security throughout the country. They have not spared those who farm – or used to farm – in the Renk and Yambio areas, two of the regions with the most significant agriculture potential. In Renk, a key informant explains that outlying farming areas have been fallow due to security fears: "we have plots at the border with Sudan and the people are afraid to go to cultivate their farms. They are only cultivating plots that are in the town here because they are afraid to lose their lives."[11] In Yambio, a respondent contrasts agricultural potential with the damage conflict has wrought: "this soil does not refuse anything. The only problem is that people left their farms where they were cultivating because of the conflict, and come to town."[12]

Gradual improvements in security since 2018 have begun to reverse some of the damage to agricultural production, but insecurity remains a challenge. The 2019 FAO WFP Crop Assessment notes that, "despite the improvements of the security situation in 2018 and 2019, the secure access to land, both near homesteads and the far fields, has been a critical issue…" and "the lingering impact of the prolonged conflict continues to severely affect agricultural activities constraining access to fields." (FAO and WFP, 2020) A simple growth decomposition of net cereal production reported in the FAO and WFP's reports illustrates the point. Thus, over 2016 and 2017, production dropped by 16 percent, driven nearly equally

[7] CAD KII, Rumbek "Many people have come to town because of the presence of fire arms in the hands of the youth, which prevented many people from cultivating. Before 2013, everybody was free to work but now the conflict has caused everything to collapse." Processor FGD, Rumbek "there are no longer people who go to the river side to irrigate tobacco or catch fish because if you go, you will definitely meet your death; maybe on your way going there or on your way back." Male Farmer FGD, Rumbek "if one wants to go to the river side to grow tobacco, you may find someone will kill you either on your way going there or on your way coming back." Female Farmer FGD, Wau "There is no place to cultivate because I rented a place from the chief and I cultivated in Rorogo (area in Wau) and Genga Bridge (area in Wau) and now that location is dangerous due to the current security situation and nobody goes there." Local authority KII, Wau "We were growing more crops like cassava, and carrots and they supplied all of Wau town; but after the independence and the war came in, it destroyed everything for us. […] if you go to your farm to cultivate you will be killed. Even I stop growing in my farm because you will shoot and you don't know who shoot you so you better stop." CAD KII, Rumbek "Fire arms are now common in the hands of our civilians which has caused inter-clan conflicts." "the presence of soldiers encouraged those who have them (firearms) to take the crops, goats and cattle of the normal farmers that have no guns". CAD KII, Rumbek "Many people have come to town because of the presence of fire arms in the hands of the youth, which prevented many people from cultivating. Before 2013, everybody was free to work but now the conflict has caused everything to collapse." Processor FGD, Rumbek "The reason why I am here in the market doing this business is because our region has a lot of looters and robbers (criminals) in that; if one goes to the villages to cultivate, you may find your death on the way and in the field during cultivation."

[8] Local Authority KII, Aweil "The 2013 crisis has decreased the number of farmers because most of them have left due to insecurity and movement of goods has been limited, which really affected most of the traders here."

[9] Local Authority KII, Juba "Two years back we went to a place called Kabo and we cut our place, everybody was one feddan, we cultivated that year. But, suddenly, some people came from the bush and then take our things and then we came back to the town and nobody went there again [sic]"

[10] Male Farmer FGD, Malakal "There is a huge change because that time we used to cultivate outside the town in the remote areas far from the town. People had land outside for cultivating different types of sorghum and later on in the summer season, you came and started cultivating vegetables and other crops along the river Nile, but now there is no way a person can go and stay there in the forest because of insecurity." CAD KII, Malakal "Before the crisis we had schemes (farms) outside; like in Gogrial and Awiel, people used to grow there, but after the crisis, everyone went to their area of origin and no one used to grow crops there and places remained empty." Female Farmer FGD, Malakal "There is too much fear to travel from the village to the town because even though you are in your house, criminals will come to kill you like they killed my brother 2 days ago. So, we are really afraid to travel, and it has affected our farms here." CAD KII, Malakal "Even people who have just returned, the majority of them are farming at the places like homes and that means if the owner of the house comes or if the house belongs to him and also if there is stability, a person will start building and there will be no places available for a person to grow."

[11] Local Authority KII, Renk

[12] Traders Association KII, Yambio

by a decline in the number of farm households (a seven percent impact on production) and in area farmed per household (eight percent), with a small additional loss in yields (see Appendix A). Since 2018, production has recovered by seven percent, driven nearly entirely by a return of farming households.[13]

Some directly attribute famine to the inability of cultivating good growing areas away from town – including because farming in less suitable areas has exposed farmers more to climate risks. Respondents not only agree broadly that insecurity has taken a toll on cultivation – some make an explicit link between inaccessibility of good farming areas and famine. A key informant in Malakal argues: "When the conflict came, people suffered and feared to go and cultivate far away… That's why people became hungry."[14] In Rumbek as well as in Aweil, respondents discussed that conflict had forced farmers to cultivate areas vulnerable to climate impacts – swampy areas near town in Aweil, and areas without access to irrigation from the river in Rumbek. A focus group participant in Rumbek explained: "if the instabilities stop today, and there are no sounds of gun shots any more, then all of us will go to the river bank to practice many economic activities like fishing, tobacco growing, irrigating fruits and grains, growing vegetables and rearing cattle. This will end famine and drought in our communities; but now if a woman risks going [to work by the river], you may be beaten severely and if not, then you will be raped."[15]

Conflict and market disintegration have reduced many farmers to subsistence farming, and market-linked production has declined. Conflict has forced farmers to abandon land in the villages and make do with limited plots around town; it has also disrupted transport and trade networks and reduced demand in the markets. In consequence, respondents report that many farmers cannot realistically plan to produce for the market anymore and are limited to trying to grow what is necessary to survive.[16] A key informant in Wau recalls that "the conflicts of 2013 affected people in many ways. It displaced many people from their places, which led to no chance of cultivation. The insecurity also prevented people from doing other agricultural activities or cultivating outside the town. […] So the farmers do activities only for their survival."[17]

2. What kind of products and activities are in the markets, and how is market activity developing?

With constrained supply and low purchasing power, there is little diversity in goods and services

Market traders offer a notably narrow range of goods and services. A qualitative analysis of activity descriptions shows that a few key products and services account for most of the activity in the markets. Meat and dairy are notably absent from the agricultural products traded frequently, artisanal products are limited to traditional activities, and there is very little variety in services provided. Table 3 shows stylized activities. An impoverished range of activities is consistent with high cost of goods and services along with low purchasing power.

[13] Data from FAO and WFP Crop Assessment Missions, 2017-2020. The growth rate in net cereal production is decomposed by observing that Aggregate production = Number of farm households x Area per farm household x Yield per area.

[14] Local Authority KII, Malakal

[15] Processor FGD, Rumbek

[16] E.g. Male Farmer FGD, Bor "I'm farming just for consumption, nothing can reach the market." "Our farming is done on a small scale and so we harvest little that can be consumed by the family."

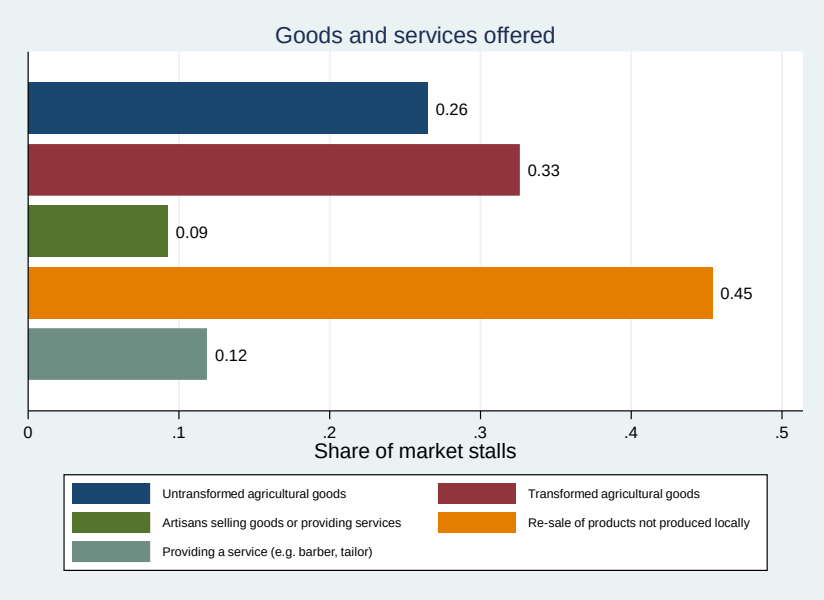
[17] CAD KII, Wau.

Table 3 Common market activities

Type of market activity	Typical products and services offered
Sale of untransformed agriculture products	Vegetables, fruit, and grains
Sale of transformed agriculture products	Flour, juice, oil, baked goods, dried and smoked fish
Manufacture of artisanal goods	Weaving, woodwork, mechanical repairs, pottery, tailoring
Re-sale of consumer goods	Clothes, shoes, soap, bikes, cigarettes, cellphones
Services	Barbers, transport, phone charging

Most market stalls sell agricultural products or re-sell consumer commodities, with far fewer artisans and service providers. In markets in our sample, just over half of all stalls (52%) offer either transformed or untransformed agricultural products (Figure 2; note that percentages do not add to 100% since many stalls sell more than one type of product or service). Just less than half (45%) are active in re-selling products not produced locally. Only about one in ten market stalls offers artisanal products (9%) or provides services (12%).

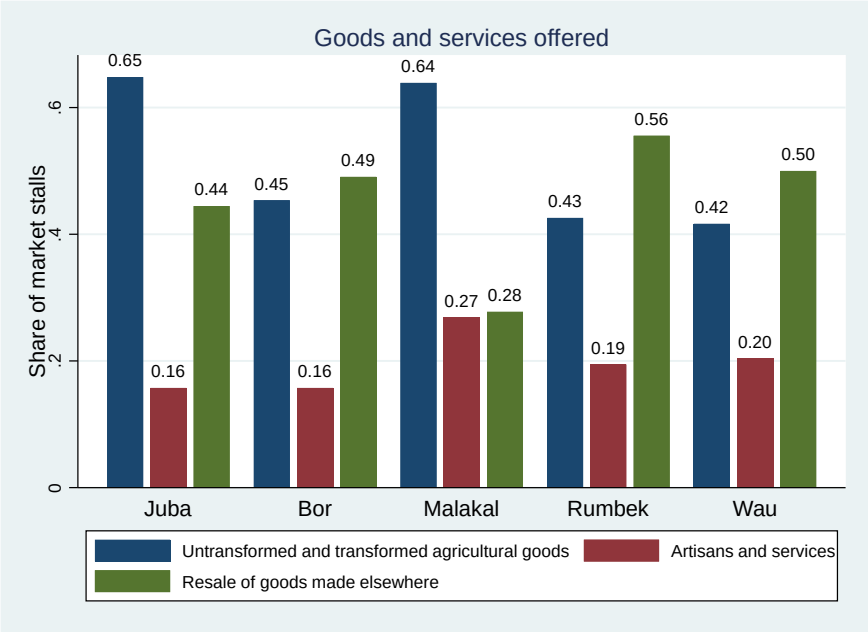
Figure 2 Goods and services offered by market traders



Market activities are similar across towns, with notably less re-sale activity in Malakal. The break-down of market activities is similar across towns in our sample (

Figure 3). In particular, artisanal production and services are least common among all activities in all localities. Re-sale of consumer goods is important in all localities, with the exception of Malakal. It is plausible to attribute this to the recent revival of market activity in the town – whether because of low purchasing power, low availability of working capital, or the difficulty of transporting goods along roads or the river. Sale of agricultural products is important everywhere, but particularly so in Malakal (a mirror image of the weakness of re-sale) and Juba (potentially due to the sample composition).

Figure 3 Goods and services offered, by town



After years of conflict and disruption, there is little diversity in agricultural products offered, and the food system value chains are few and short. Stalls that sell unprocessed agriculture products are most likely to focus on a few types of vegetables. Flour, juice, and baked goods are the locally transformed products most often offered by traders (Table 4). While some stalls sell a broad variety of unprocessed produce, most focus on a narrow range of products, led by tomatoes (42%) and onions (27%). Stalls that offer transformed agriculture products are most likely to sell flour (imported as well as locally milled – see below), juice, and baked goods, with some additional products sold by fewer than one in ten stalls. There is a broader range of basic imported foodstuffs such as oil[18], sugar, tea, and salt. Interview respondents also report that there is significant activity in fermenting alcohol and producing charcoal.[19] As is evident, all of these food sector value chains are rudimentary; most involve a single processing step after harvest (e.g. groundnut paste), and little packaging or transport. Some additional products are important in particular towns, but not more broadly – for instance, honey in Yambio.[20]

[18] Some palm oil is locally produced.

[19] E.g. Local Authority KII, Aweil "There are different processing methods as you said it before that processing is to change something from raw materials into a more useful product like now women process groundnuts into groundnut paste then sell it out to get money to buy other things like seeds; and what men do is fishing or buy both fresh and dry fish from the river then sell them in market to get money. Some women engage themselves in activities like making *mandazi* (local doughnuts) from wheat four, groundnut paste and *madamas* (fried groundnuts) from groundnuts to get money for sustaining their families and paying school fees for their children. All those raw materials like grains and groundnut are cultivated here in this region and they sell them to get money for (medical) treatment, seeds and other things."

CAD KII, Bor "Those (value chains) who are making bakeries, they are there and there are those who have the grinding mills and those who have these processing machines and there are those who are preparing fish, they are preparing fish in the locality and there are those who smoke part of the fish."

[20] Trader FGD, Yambio "The honey is made locally within Gbudwe State." "We get honey from village markets like Bangasu, Burezugbo and Makpandu." "We (honey trader) have many customers, those who buy, send the honey to Juba, Kampala and other parts of the world and also the UN buys honey from us sometimes."

Table 4 Agricultural products offered in the market

Unprocessed agricultural goods		Processed agricultural goods	
Tomato	42%	Flour	28%
Onion	27%	Juice	23%
Other fruit and vegetables	15%	Oil	18%
Okra	15%	Baked goods	18%
Beans	11%	Sugar	16%
Leafy vegetables	8%	Tea	10%
Rice	8%	Dried and smoked fish	9%
Corn	7%	Salt	7%
Lemon	7%	Cooked food	6%
Fish	6%	Groundnut paste	5%

A richer range of food products and value chains survive, but as niche activities with few jobs and little output. While there are few food sector value chains that employ many market traders, there is in each town a broader range of activities of value addition. However, these are not thought to involve many active workers or substantial levels of output. For instance, in addition to the activities listed above, participants in a focus group discussion with processors in Malakal mention churning butter, making falafel, and drying okra. Key informants in town also cite as examples of processing activities popping maize, processing milk into yoghurt, and curing meat.[21]

The impoverished range of products is a result of the conflict's impact on cultivation and livestock ownership

The limited number of products in the markets reflects a loss of diversity in crops cultivated due to conflict. In towns throughout South Sudan, respondents involved in agriculture and food system value chains are acutely aware of a loss of diversity in agricultural products. Conflict has led to a concentration of activity in the most essential subsistence crops, notably sorghum, maize, cassava, and groundnuts, with some recovery of vegetable production. Respondents vividly recall that the range of crops used to be richer. For instance, respondents in Malakal report that many farmers had stopped cultivating crops like gum arabic, potato, sesame, and fruits like mango, lemon, banana and guava. In Juba, farmer respondents suggest that crops now scarce in agricultural areas close to Juba include: a local variety of dura, sweet potatoes, finger millet, pigeon peas, groundnuts, maize, and two variants of beans (*logudi* and *ju'gbat*).

[21] Participants in the processor FGD did the following activities: baking bread or other goods, churning butter, making falafel, milling, drying okra, selling groundnut paste, brewing alcohol, and making donuts. Local Authority KII, Malakal "If it's changed to flour, it is taken to the market and changed to kisra (local flatbread) and eaten in the market. It will be changed to kisra (local flatbread), asida (local porridge), walwal akob (local porridge) with milk and it will be changed to native beer, called aselya (local alcoholic beverage); there is buga (local alcoholic beverage) and white beer… You do walwal (local porridge) with milk. This is maize. This is maize and it can be beaten, milled and boiled with water; it can be gathered and eaten. It's like rice. Maize can be (made into) popcorn, it is eaten, it is fried on a pan, and its kernels are big… Fish can be done as soup and fried on a pan as shaya (barbeque) and fish can be dried." CAD KII, Malakal "In fact, the food most (commonly) processed as you mentioned it is milk; milk can be processed into many kinds of foods like it can be sold as normal fresh, yoghurt or butter (oil). All these three things are processed from milk, but for the rest of the fruits, their processing is very poor and I don't know really." "There is dry fish; fish is brought and now there is fried fish. The fish can be boiled and after that, this soup can be separated and drank, but the same fish can be fried in the oil for some time and transported with this oil to other far places to sell for consumption by the travelers, so fish is commonly consumed here."

The narrow range of crops grown is due to poor availability of seeds, destruction of tree crops, low demand in the market, lack of access to appropriate land, and erosion of knowledge. Respondents provided a range of explanations as to why certain crops were no longer widely cultivated. Many pointed to the difficulty of obtaining seeds[22], and some noted that humanitarian organizations only provided a few types of seeds.[23] In addition, respondents said that with cash-strapped households in town, it was hard to find customers. Conversely, producers who were fighting to stay afloat could ill afford to invest in crops that would take months to mature – for instance, tree crops and other crops that are slow to mature.[24] Others argued that tree crops had been destroyed during conflict[25], and that insecurity had made land suitable to cultivating certain crops inaccessible, or led to displacement of those with the knowledge of how to grow the crops.[26]

> ***"Even if one wants to have oxen for ploughing, then just know that you have brought yourself death..."***
> *Farmer, Rumbek*

Limited activity in livestock value chains relate to the danger of keeping livestock and the high incidence of theft. South Sudan has considerable herds of cattle, small ruminants, and poultry. However, while there are some examples of value addition around meat, chicken, dairy, and skins and hides, there is relatively little mention of it in FGDs. Nor are these products conspicuous in the market data. Many respondents explained that this was due to loss of livestock to cattle rustling and theft of smaller livestock during the conflict.[27] In addition, many different KIIs and FGDs

[22] Male farmer FGD, Malakal "The groundnuts are very expensive to buy and with what we have; we can't afford groundnut seeds." "It (sweet potato) is not in this area at all; I searched for it and didn't get it. There is no potato as well, potato doesn't have seed also." Female Farmer FGD, Malakal "Even now we are not growing groundnuts because we don't have seeds to grow them." Female farmer FGD, Yambio "*Simsim* (sesame) and *ndoko* (small type of sesame), which we used to plant, we don't plant anymore. We don't have their seeds." CAD KII, Juba "Those corps [pause] those ones like cereal, mostly finger millet, millet, and then beans and then [pause] pigeon peas. Those are the most important crops that people were growing back... these I cannot see; they are no longer there. … [For crops] like the finger millet and the millet, maybe because the seeds, to me the seeds is no longer there, because at times drought also can disturb even if it was, they used to grow but due to climactic conditions then some of those ones can easily disappear… They have that interest of growing it but access to get the seeds is, really very difficult."

[23] Male Farmer FGD, Malakal "There are different types of seeds; there are not one, two or three, there are so many of them that cannot be provided by all the organizations. For instance, last year; I produced different types of okra, different types of watermelon, different types of ginger here in the market, so I had sent someone to Renk in order to bring them (seeds) for me because you will not be able to grow all the seeds that are provided by organizations. So, you will not be able to cultivate all the seeds that organizations provide like sugar and sugar cane, nobody will buy your produce, you have to balance between the ones provided by organizations and the local seeds either local ones at one time and the other ones from organizations in the next round." Traders FGD, Rumbek "We did have the groundnuts by the name of *maborgok* (white groundnuts), but the main reason for their disappearance is because of insecurity and mismanagement whereby someone may have some number of those and he or she may consume them all without leaving the seeds for planting in the next season. Also, during the inter-clan fighting, if the owner ran away for safety, there are those who will come and will steal all those crops and utilize them all."

[24] CAD KII, Malakal "(before 2013) there was sorghum and agono (similar to sorghum). People grow these types of crops because they match with our situation in this area. They can spend 8-9 months to get ready for the harvest which is a very long period of time. So, these were the types of crops grown by people in this area. After that, there are small types of sorghum like wad ahmed and gedam that are grown on the farms because they produce (grow) in a very short period of time like 2- 3 months, so they were grown in many farms because 6 months was a very long period. But now, it no longer exists because you can produce something so that you cannot get a consumer to buy it."

[25] Local Authority KII, Malakal "They (mangos and guavas) were grown but the trees which we left up were burnt due to the fires (in 2013 conflict). The trees became dry and died" Local Authority KII, Malakal "Before the 2013 conflict, people where happy because mangoes, guavas and lemons had been grown and when the conflict happened people went away the grass caught fire and everything was burnt."

[26] Female Farmer FGD, Aweil "We don't cultivate crops like amaranths, tomatoes, *kudra* (greens) and others due to lack of a water source to water them" Female Farmer FGD, Wau "We were growing hard groundnuts in large quantities but at the moment, we are not growing them like before because we have moved from that place." Local Authority KII, Aweil "Some value chains that are not put into practice because there is no accessibility to tell people on how to process the raw materials. Like now nothing is going on due to insecurity."

[27] Female Farmer FGD, Rumbek "we do not have cattle/cows because of this war, all ours have been looted. Even if a bride price has paid today, then tomorrow you will hear that they have been taken by thieves and because of the looting we have to stick to farming with a couple of oxen to plough the land and cattle rearing/keeping is for looters (criminals)." Male Farmer FGD, Rumbek "I used to plough it with oxen but due to the

discussed the grave danger owning livestock exposed owners to. A farmer in Rumbek concluded that "even if one wants to have oxen for ploughing, then just know that you have brought yourself death..."[28] A woman farming in Juba explained that "Before, we were keeping [goats and chickens] and even widows were keeping them. […] when you got hungry, you could take it to the market to sell it or you could live with it and raise it. But during the time of war if you brought these animals home you brought death upon yourself. You could not sleep at night because you didn't know if you would be killed or if your children would be killed. Sometimes [people] would take [the animal] alive, they would untie it while you are watching them but if you scream and tell them 'don't take it!' they will shoot you. Even if they can see that you saw them, they will shoot you dead. This is the reason why now, … you will say 'oh my son, take this, it's yours. Take it to the market and sell it and bring me the money because I don't want to die'."[29] The reluctance to replace lost livestock it is particularly worrisome given that historically, loss of livestock was associated with protracted rises in poverty.

Disease further takes a toll on livestock ownership. While respondents most discuss the threat of livestock theft and violent robbery, others point to disease as a complication in making a living with livestock, whether cattle, goats, or chickens.[30] Some respondents reflected upon a sense of powerlessness in dealing with animal diseases. A male farmer in Bor argued that the "problem that we are facing is the disease that kills our cattle especially the east coast fever of the cows. East coast fever is not treatable because there are no drugs that are within reach here." His colleague agreed: "we are cattle keepers, but … I have no cows now as you can see the East Coast fever has finished all my cows and I have lost interest in keeping them anymore because you can buy a cow today and lose it the next day, so I have nothing as I'm speaking."[31]

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raiding of the cattle by the cattle raiders, it has left us with nothing." Male Farmer FGD, Rumbek "Reasons why some people lack land for cultivation is because a long time ago they depended on nomadic pastoralism but since the conflict (internal conflict) broke out in our areas, it led to cattle raiding" Male Farmer FGD, Bor "there are no cows or other animals being reared compared to what used to happen before all the insecurity, and things are very expensive. I don't even have a single cow with which to support the children now." "we have been deprived by the insecurity of cattle raiding in our state here." Female Farmer FGD, Bor "these days; cattle raiding is common." Male Farmer FGD, Torit "[Keeping cattle] is a problem because there is a certain group, a gang, who is specialized in cattle raiding and that is why we don't keep cattle." "We don't keep some livestock like cows and goats because if you have them, you are bringing problems to yourself; even chickens, except some people are trying to keep them at home but it is very threating (dangerous)". Male Farmer FGD, Juba "The activity that we are no longer doing is keeping goats, cattle and chicken after 2013. These days, if you are keeping these animals you will either be killed or they will be stolen from you or you will be beaten. Even the chicken nowadays, if it is not under the protection of the almighty God, chickens can also be stolen." Female Farmer FGD, Juba "Before, we were keeping goats, especially us women. When there was a marriage, you would be given a goat and chicken but now it has become a problem. People would steal the chickens by filling their beaks with water so they can't make noise, and even when they do make noise, people will just take them anyway. All of these incidents happen at night and that is why we fear keeping these animals at home." Male Farmer FGD, Malakal "We had cattle and other livestock, but we lost them. […] all these people don't have even goats and sheep, we lost them early." Female Farmer FGD, Malakal "During the war, I lost a lot of cows and goats… During the war most of the cows died but I have goats and if the goats give birth to more, I will exchange them for a female cow and the female cow will give birth to more cows." Trader's Association KII "Cows now are not available in Malakal. The cows were many in Makalal before the conflict."

[28] Male Farmer FGD, Rumbek

[29] Female Farmer FGD, Juba

[30] Male Farmer FGD, Aweil "Of course we have cows, but cows are not helping us a lot nowadays because the only thing we can get from them now is the meat. They no longer produce milk like now, I've five cows but I'm not getting milk from them because last year they contracted a disease and we don't know what that has done to the cows that they aren't producing milk anymore. So we actually have cows but no milk." Male Farmer FGD, Yambio "There are some (chickens) that become infected with diseases and they all start dying. Even for animals, like goats, there are diseases that affect them. We don't have medicine that can prevent these animals from dying."

[31] Male Farmer FGD, Bor

Market activity is recovering, after much destruction during the conflict

Conflict put many market traders out of business or forced them to reduce their activities. Our market survey inherently only captures the job experience of traders who today remain active in the market. Those who have had to abandon their business during the years of conflict are not reflected. However, respondents in key informant interviews and focus groups eloquently describe the difficulties small and large traders alike encountered during conflict.[32] Looting of stocks has destroyed working capital and made it hard for traders to operate at scale.[33] Displacement has further reduced activity.[34] In some towns, markets were physically destroyed – including the markets in Bor[35] and Malakal[36], as well as Jebel market in Juba.[37]

Even among those in business today, one in four traders say they have had to temporarily close during the conflict. Across towns, one in four market traders (25%) say they have experienced an interruption to their business during the conflict, most frequently in Malakal (40%), and most rarely in Bor (7%). Most interruptions were relatively short – two months at the median, and three months at the 75th percentile. However, some market traders have experienced long breaks in their activity – about one in ten had to stop trading for a year or more. Hence, the average length of the interruption is five months. The most common reason for the longest interruption in doing business is that it was unsafe to go to the market (39%), followed by lack of access to funding (35%), and difficulty in dealing with high inflation (18%).

Most market traders active today have started trading recently. More than two in every five traders (44%) say they have begun their activity over the past year, and nearly four out of five (78%) say they started over the past five years, after the beginning of the conflict. The share of older market activities is notably higher in Wau where, for instance, one in four market stalls (25%) have been operating since before independence.

Traders report that activity and supply in the markets has increased strongly over the past year – but it is not clear whether demand and incomes have risen concurrently. Across the five localities in our data, market traders agree that activity in the markets has increased by many measures (Figure 4). For instance, market traders are two to three times more likely to report an increase than a decrease in the number of traders, the diversity of goods and services, and direct competition – the number of stalls offering the same goods or services the traders sell.[38] By way of contrast, traders are equally likely to say that there

[32] Trader FGD, Bor "When the crisis came; businesses collapsed and now the income is not so huge like it used to be, so basically we are selling things like beans, flour and other small things for home consumption." Trader FGD, Malakal "This conflict has really destroyed traders particularly here in Malakal, and greater Upper Nile in general, traders were destroyed by the conflict in 2013 up to now."

[33] Trader's Association KII, Rumbek "[The number of members in the trader's association] is reduced because of the looting that was happening on the roads; but there are strong people who stayed committed." Trader FDG, Wau "You know before 2013, I had a shop in Suk Jau for perfume; and during the time of war I lost everything and from 2013, 2014 until now I opened a new shop and I am not selling scents, I have changed." "During the war, me personally I have lost all stocks every day. That is why I'm starting my business from the scratch." Processor FGD, Malakal ". I processed and sold anything (many things). When all my items were looted, I ran to Juba then to Uganda." Trader FGD, Malakal "Our shops were looted, now I am a trader but I sell few products but I thank God, if there is peace and security everything will be normal, but now there are challenges."

[34] Trader's Association KII, Malakal "Before the conflict there were many traders here in Malakal but since the war erupted; some traders ran to Renk, some ran to Juba and other places that are safe." Male Trader FGD, Rumbek "during the inter-clan fighting, if the owner ran away for safety, there are those who will come and will take away (steal) all those crops and utilize them all."

[35] Trader FGD, Bor "when the crisis came in 2013 our businesses were destroyed, shops were burnt to ashes we were left with nothing." Trader's Association KII, Bor "After '13 the market was destroyed completely, it was burned. When you came in May 2014, the market was empty."

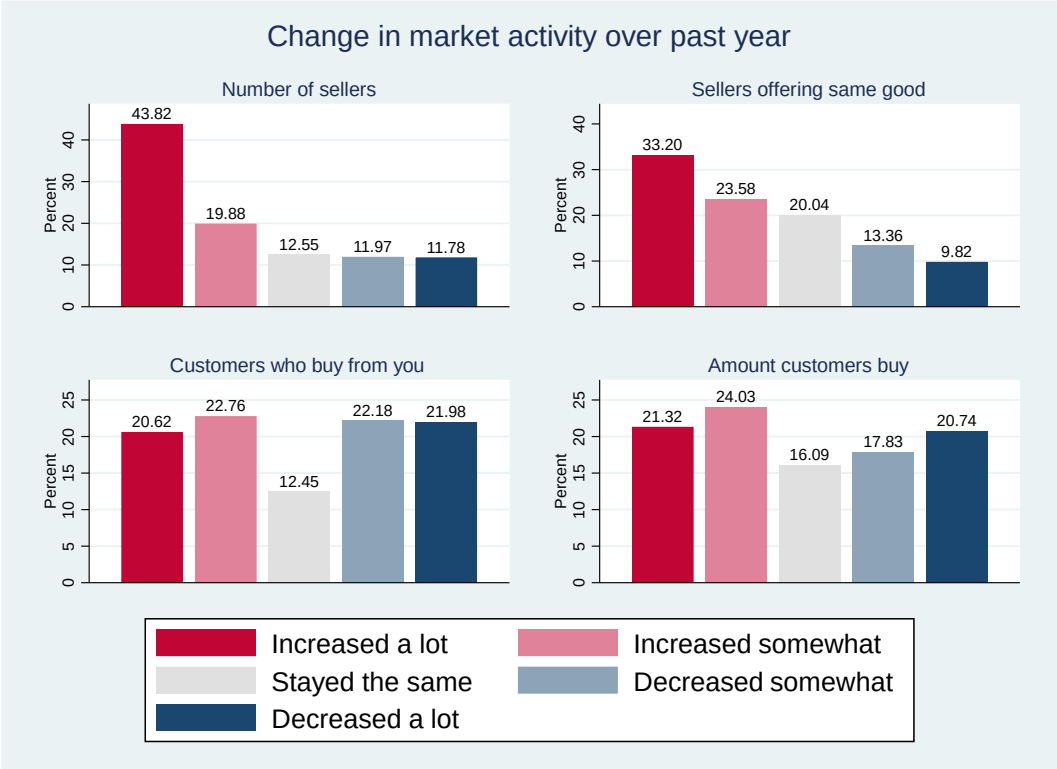
[36] Trader's Association KII, Malakal "All the buildings in the market have collapsed as you see there is nothing."

[37] Trader's Association KII, Juba "Jebel market was totally destroyed and all the traders started from the beginning again because they lost a lot of goods and the total number of traders decreased."

[38] 'Increased a lot' and 'increased somewhat' compared to 'decreased a lot' and 'decreased somewhat'.

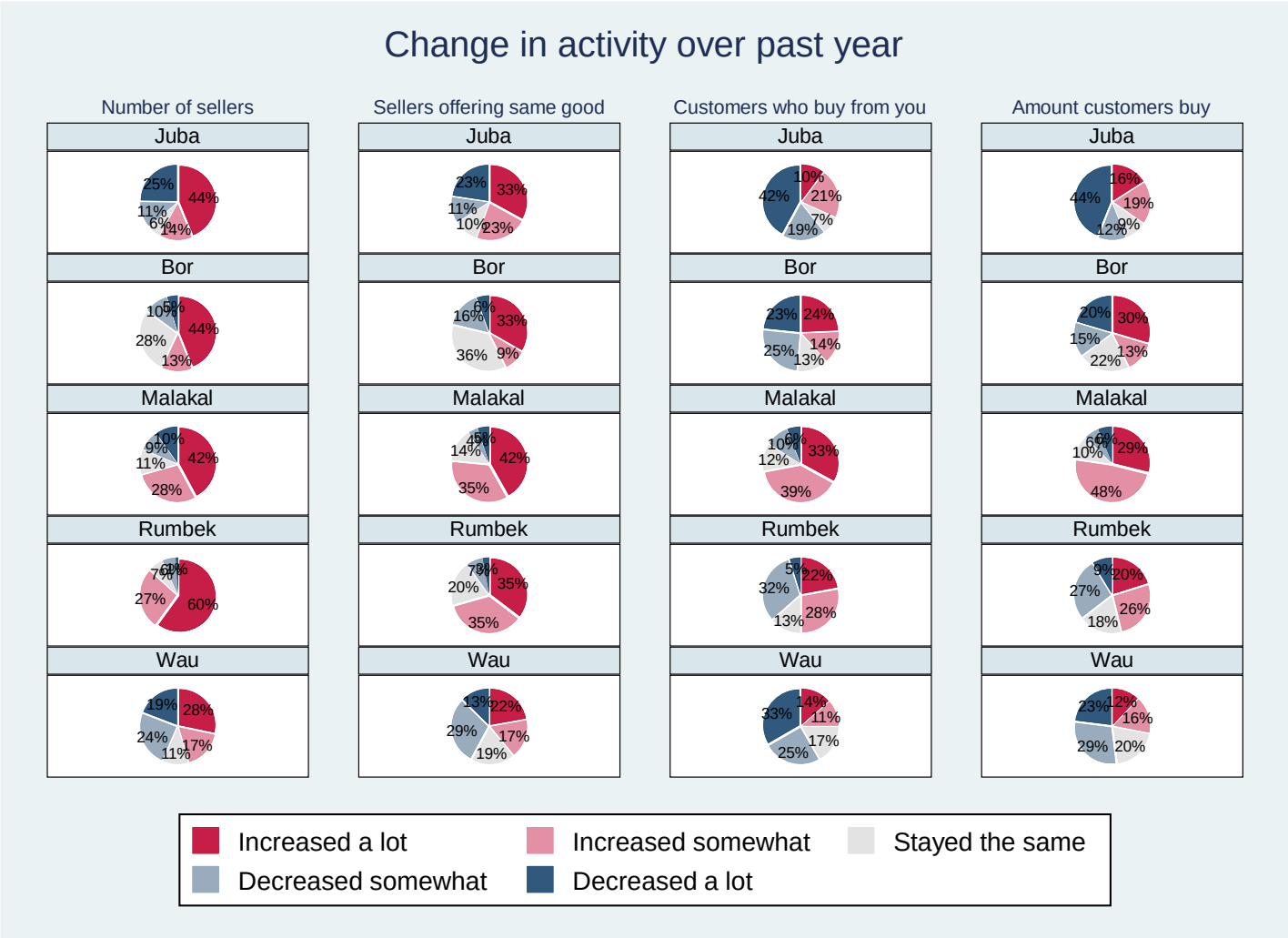
has been a positive or adverse change in the number of customers they have, the amounts customers buy, and their income from the stall.

Figure 4 Change in market activity over year preceding the survey



Market activity has particularly recovered in Malakal and Rumbek, from a low level. A comparison across towns of trader views on market supply and demand shows that supply has particularly recovered in the Malakal and Rumbek markets (Figure 5). Between seven and nine out of ten respondents feel that there are now more sellers, products, and competition among sellers, compared to four to six out of ten in the other towns. Traders in these two towns are also nearly twice as likely as others to feel that their incomes have risen – and those in Malakal are the only ones to indicate clearly that demand has increased.

Figure 5 Change in market activity over year preceding survey, by town



3. Who trades in the market, and what kind of a job is working in the market?

Market traders tend to be fairly well-educated and old enough to have accumulated savings; those selling foodstuffs tend to be South Sudanese, with more participation of foreign traders in commodity trade

Most market stalls are run by their owners, while a few are run by managers on behalf of owners as an investment. About nine in ten owners of market stalls (89%) work at their own stalls. A few others maintain a stall as an investment, and hire a worker to be responsible for running the stall.[39] Of the responsible workers hired, one-third (33%) are from the owners' families, but the others are hired from outside the family as a store manager. Stall owners generally live in the same town where they are active in the market (88%), as do even slightly more of responsible workers (90%). This includes those owners who were not present at their own stalls at the time of interview. Of those owners who do not live in the

[39] As noted, we use the following terms: 'market traders' for all who manage a market stall, whether they are the owner or a hired worker; 'responsible workers' for workers who manage stalls; and 'traders' for businesspeople who buy and sell beyond a single market.

same town, nearly all (91%) live within half a day's travel. Since few owners travel from outlying areas, this raises the question whether there are other ways in which local market integration takes place – for instance, by traders traveling to and from villages.

Market stall owners are typically their mid-twenties or thirties – an age when workers have had opportunity to accumulate some savings – the older the owner the higher the revenue. The median age of market stall owners is 33; one in four is aged 27 or under, and one in four aged 40 or above. Ownership is thus concentrated fairly tightly among workers in their late twenties or thirties. Older stall owners also have higher revenues – those older than the median have nearly twice the revenue than those below (20,000 South Sudanese Pound and SSP 11,000, respectively – at survey time, the exchange rate in the parallel market was about SSP 300 per USD). As we show below, market activities are largely self-financed and there is virtually no use of credit. It is therefore likely that young workers take time to save up enough funds to run small market activities, as is the case in low-income fragile countries throughout the region.

While there are some illiterate market stall owners and responsible workers, most are quite well-educated. About one in four owners and one in six responsible workers are illiterate (Table 9). However, half of all owners have at least completed secondary school (35%) or have higher education (14%). Responsible workers tend to be particularly well-educated, and almost half among them have more than secondary education (49%). As one might expect, few owners who use their market stall as an investment (but do not work at the stall) have less than primary education.

Table 5 Education levels of market traders

Education level of owners for market stalls and market workers

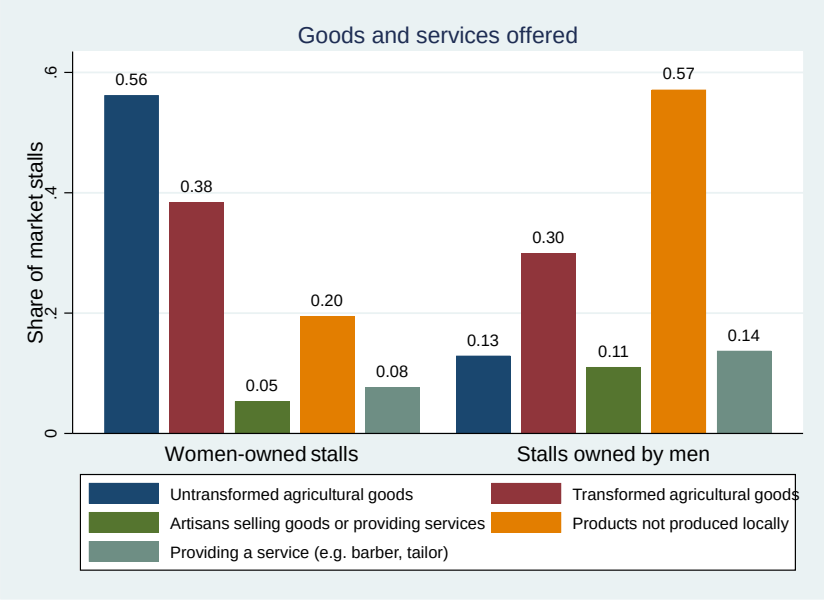
	Owners			**Responsible workers who are not the owner**
	All	*At stall*	*Not at stall*	
None, cannot read	24%	*26%*	*7%*	16%
None, can read	4%	*4%*	*3%*	2%
Completed primary	23%	*20%*	*45%*	4%
Completed secondary	35%	*35%*	*33%*	29%
More than secondary	14%	*14%*	*12%*	49%

More than two-thirds of owners are men, as are four in five responsible workers. More than two thirds of market stall owners (69%) are men. It is particularly rare for women to own a stall as an investment without also working at the stall (84% are men), or to be the worker responsible for managing such a stall (78% are men). As reported above, women are more likely to be active in selling agricultural products, and men to be engaged in re-selling consumer goods.

Women are much more likely to be engaged in selling untransformed agricultural products, and men in re-selling consumer goods. More than half of the stalls owned by women sell untransformed agricultural goods (56%), but only about one in eight stalls owned by men do (13%; Figure 6). Women are also a bit more likely to be selling transformed agricultural goods (38% of stalls compared to 30%). Conversely, men tend much more toward re-selling consumer goods (57% of stalls owned by men) than women (20%). One

could conjecture that these specializations could have to do with traditional roles as much as with access to capital (given that stalls selling consumer goods have higher turnover). While neither women nor men are very likely to work as artisans or in providing services in the market, men are about twice as likely as women to be involved in these activities.

Figure 6 Goods and services offered by women and men in the markets



South Sudanese own three out of five market stalls, while Sudanese and Ugandan traders own about one in three stalls. In the five markets we surveyed, three out of five owners (60%), and seven out of ten responsible workers (71%) are South Sudanese (Table 6). Sudanese traders have a particularly strong presence in Bor and Wau, where they own about two in five stalls. Ugandan traders are next most common among owners, in particular in Juba, where they own about one in eight market stalls. Most women in the market are South Sudanese (85%), and most who are not are from Uganda (11%). Among men who own market stalls, half are South Sudanese (48%), and those from abroad are most likely to be from Sudan (37%). Those who offer agriculture products or offer services (75%) are much more likely to be South Sudanese nationals than those who re-sell consumer products or offer mixed goods (44%). However, the presence of foreign traders is greater among those who trade grain and flour (45%).

Table 6 Nationality of market traders

Nationality of owners of market stalls	South Sudanese	Ugandan	Sudanese (Khartoum)	Other
All owners	**60%**	**7%**	**26%**	**7%**
Owners who work at stall	59%	6%	27%	7%
Owners who do not work at stall	64%	10%	17%	9%
Responsible workers who are not the owner	71%	14%	10%	4%
Women	85%	11%	2%	3%
Men	48%	5%	37%	9%
Agriculture products and services	75%	4%	15%	7%
Grain and flour	55%	5%	22%	18%
Fruit and vegetables	81%	6%	9%	4%
Re-sale of consumer goods and combined goods	44%	11%	38%	8%

Market traders active in food value chains include farmers, professional market traders, and processors.

Farmers active in the market are mostly selling small amounts of surplus for cash, often to cover specific expenses. As noted, conflict has forced many farmers into subsistence production. Those active in the market tend to say that they offer modest amounts of produce. Some are selling a surplus and use their revenue to enrich their diets or other purposes. A farmer in Yambio reports that "if you cultivate maize on like four feddan, you can say maybe [the harvest from] three feddan is to sell and from one feddan is for home consumption."[40] But others explain that they are in the market because they are pressed to make some cash income for expenses related to education or sickness, and that what they sell detracts from what they need for sustenance. A farmer in Wau explains: "We sell our crops when there is something that requires money. Then, you can measure like 3-5 tins [of groundnuts] so that you can sell in order to cover what you require. The crops that we grow are only for subsistence use, that is why we are rationing them." Another agrees: "our crops are few and if we sell them, what will our children eat?"[41]

Professional market traders re-sell agriculture products sourced from farmers or large traders. Farmers do not necessarily sell their goods to individual customers in the market. Some sell wholesale to market

[40] Male Farmer FGD, Yambio. Many respondents have similar experiences. Female Farmer FGD, Bor "We keep some [of our harvest] for selling in case of sickness and needing medication." "The remaining [surplus] may be taken to the market maybe for buying meat for changing the diet for meals." Male Farmer FGD, Juba "The maize that we grow, if it is mature and ready for consumption, we can harvest a certain portion to take to the market to sell and use the money to buy certain types of food and also pay children's school fees. And the other portion of the maize can be dried and remain for domestic (family) consumption. This is how we help ourselves. When those crops are harvested, the harvest can be divided into family consumption, and the other portion is taken to the market to sell so that it is used to exchange for other goods, and this makes people happy." "Our harvested crops benefit us in two ways. One portion is taken to the market and the remaining portion is used for family consumption." Female Farmer FGD, Torit "We grow these crops so that we can divide the harvest, one portion is consumed at home and another portion is taken to the market so that you can pay (your) children's school fees." Female Farmer FGD, Wau "After storing in the store and when the price is high in the market, you can now bring out and sell." "if this year, your groundnuts production is high, like 15 sacks, you store them and like now when the prices are high and you have shortage in the children's school fees, you can take one sack and sell it to cover the shortage." Female Farmer FGD, Yambio "We plant them (groundnuts) because when your child falls sick, you pick two or three basins to sell. [You] carry it to the market and sell it in order to help the situation." Female Farmer FGD, Yambio "We sell some and leave some for food consumption. It is the one we eat that helps us with [feeding] our children and we sell some to pay school fees and [address] other problems that may arise."

[41] Male Farmers FGD, Wau. Compare also Local Authority KII, Rumbek "We only cultivate for food but when you are sick you can sell some of them to treat yourself."

traders.[42] A key informant in Juba explains that farmers "are not the kind of trader that sits in the market to sell their products. They just grow them and bring them to the market to sell wholesale and the small [market] traders buy from them and sell them to the end user to make a small profit. For example, if you go to Suk Libya market you can find big cars that bring goods nearby from Jebel Lado and other nearby places. They bring kudra (green vegetables), okra, and other vegetables. They bring them in sacks and they aren't big traders because they sell their products all at the same time in order to exchange them for other things they need like oil, onions and flour. After that they go back to their residences."[43] Others active in the markets source from large traders.[44]

Processors active in the market generally work with minimal budgets and few tools, using own produce or inputs bought from farmers. Processors variously report using their own crops, buying their raw materials from farmers and traders or combining the two.[45] While there is some mention of machinery being used in processing, many discussions revolve around the use of traditional methods and hand tools.[46] Processors complain that machines, such as milling and grinding machines, are expensive and not easily accessible. Processing is often either a small activity to complement subsistence farming with some cash income, or it is a fallback for households without any other job activities (see below). At the same time, processors explain that cost can add up fast if they have to pay for transport, or inputs such as fuel. In consequence, processors find it hard to buy inputs even for limited production, much less to take on risk to expand their business.

Every three market traders employ between them two workers from outside their families

About one in three stalls employ workers from outside the owner's family. About one third of stalls (31%) employ workers who are not members of the owner's household, in addition to family helpers (Figure 7). This share does not vary much between different towns, but it does vary by the stalls' activities. Thus, few stalls (16%) that sell untransformed agriculture products employ workers from outside the family. Those that sell transformed agricultural products are more likely to create an additional job (35%) – as are those that sell consumer goods (33%), or offer services (44%).

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[42] Male Farmer FGD, Bor "I just give them out at wholesale prices to the women groups that have tables in the market."

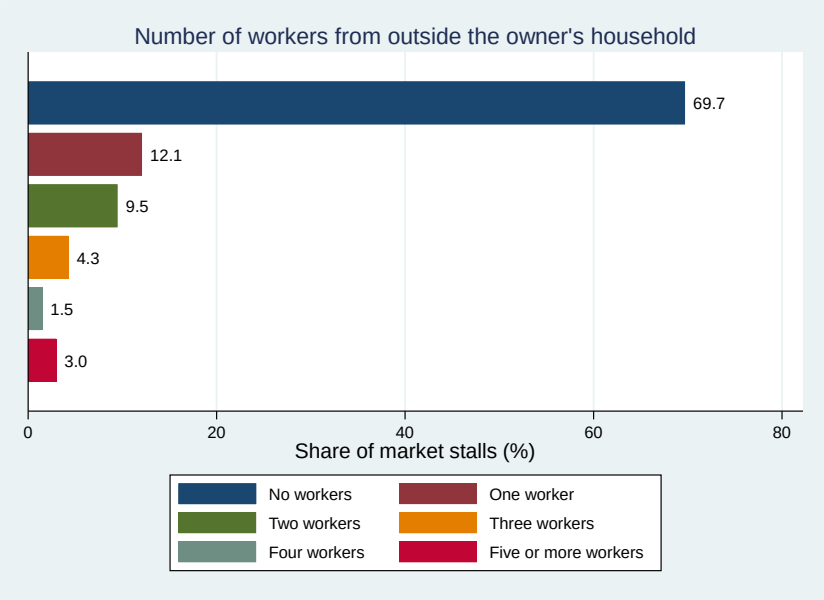
[43] Traders Association KII, Juba

[44] Trader's Association KII, Malakal "Small traders buy their product here in this particular market, for instance if a certain trader brought products/goods from Juba, the first thing he does is that he sells the goods to large traders and after that small traders buy from the large traders so there isn't any other market apart from this."

[45] Examples of each approach from the Processor FGD, Aweil: "Some of us do (engage in) farming like when you harvest ten sacks of groundnuts, you will have to process five sacks of groundnuts into groundnut paste and keep the remaining five sacks to use later when there is a shortage of groundnuts in the market." "Well, I do buy groundnuts from farmers and sometimes from retailers like one or two malows [local tin used as a unit of measurement], then I process it. I do not do [engage in] farming because there is no time to go for cultivation." "Yes, we do farming with my husband; we usually cultivate two acres of land which sometimes produces 20 sacks of groundnuts. Then, we use ten sacks of groundnut for food at home and sell the other ten sacks for business which is still not enough to run a business. We do buy most of our groundnuts from farmers because it saves time and does not require a lot of work."

[46] For instance, Female Farmer FGD, Rumbek "There is our local way of making butter. We put milk in gohoom [calabash] to first ferment it like for two to three days then you shake it for almost thirty minutes. Later on, butter is produced." "Okay; if you go in your store, get some sorghum or millet then pound them to get flour." "If it's groundnuts, you have to crack them, put them on fire and after, you remove the cover and pound them or grind them on the grinding stone"

Figure 7 Number of workers from outside the owner's household employed at the market stall



For every three stalls in the market, there are two jobs created for workers from outside the owners' families. While only one in three stalls employ workers from outside the family, those who do usually hire several helpers. Thus, businesses that do employ any workers that are not in the owner's household hire two workers at the median. About one in seven (15%) employ more than three. Hence, the average number of employees per stall is 0.7 among all stalls. These read as modest numbers, but they do imply that employment in markets is likely to be a significant source of jobs: any three market stalls in our sample employ two workers from outside the owners' households, in addition to the work they provide for family members.

Workers in the market can expect to be paid about US$2 per day, and workers responsible for managing stalls a bit less than US$3 per day. The median wage paid to non-household workers is SSP 600 (Table 7). One in four report that they are paid SSP 400 or less, and one in four say they receive SSP 1,100 or more. There are no conspicuous (or statistically significant) differences in median wages between stalls that carry out different activities, but the limited data suggests that wages in Juba are higher (significantly, while Malakal is not). While we have very little data available, workers responsible for running a stall for an owner who is not regularly in the market report being paid 800 SSP per day at the median (N = 23). One in four receive SSP 500 or less, and one in four SSP 1,500 or more. The fact that these workers – who typically have secondary education or more - are willing to work for relatively modest wages as stall managers speaks to the modest current reservation wages.

Table 7 Daily wages of market helpers (SSP)

Daily wages paid to market helpers from outside the owner's family (SSP)

	Median	25th percentile	75th percentile	*N*
Total	**600**	**400**	**1,100**	***148***
Agricultural products	**600**	400	1,200	*47*
Re-sale	**500**	400	1,000	*53*
Services	**650**	400	2,000	*21*
Combination of products and services	**800**	500	1,500	*27*
Juba	**1,000**	700	1,500	32
Bor	**500**	300	1,000	26
Malakal	**1,000**	400	2,000	30
Rumbek	**500**	400	1,000	25
Wau	**500**	300	650	35

Most market traders rely on their job in the market for most of their household's livelihood; revenues are meaningful relative to local wages of unskilled workers, but reflect very modest sales

At the median, market traders expect to earn about the equivalent of US$17 per day in revenues. Data on revenue collected in our survey displays some of the same weaknesses commonly encountered in such data, and must be viewed with caution.[47] Half of the shopkeepers interviewed (48%) were able to report revenue. Data is missing quite evenly across types of activities, but much more often available in Wau (72%), and much more rarely in Bor (27%), likely due to different capacity of the survey teams. As is to be expected, the range of reported revenues is large, and it is very skewed. The median market trader reports earning about 5,000 SSP (17 USD) during a day in the market (Table 8). Yet, there is a wide range of levels of activity: one-quarter of vendors say they earn 2,000 SSP (7 USD) or less, and one quarter earn more than 15,000 SSP (50 USD).

Median revenue is equivalent to about ten times the typical daily wage for unskilled workers, or the cost of about 22 kilogram of wheat flour in the retail market. For a sense of proportion, the median revenue of market traders is about ten times higher than the SSP 500 median wage paid to unskilled helpers. However, it is equivalent only to the value of about 22kg of wheat flour at the Juba retail price at survey time (FAOSTAT).[48] Traders thus typically have a sales volume that is significant relative to economic activities of others in the community, but reflects modest turnover in goods.

Vendors of agricultural products and service providers have low typical revenue, but those who re-sell goods report much higher earnings. To better understand reported revenue, we disaggregate by the kind

[47] Revenue is reported gross, without subtracting the cost of inputs or other costs.
[48] SSP 223 per kg of wheat flour in September 2019. http://www.fao.org/giews/food-prices/tool/public/#/dataset/domestic

of market activity owners engage in. Those who sell agriculture products report a median revenue of SSP 3,000 (about US$10), similar to the SSP 2,000 reported by owners who provide services. The revenue of those who sell agricultural products is equivalent to the price of about 17 bundles of leafy greens in the Malakal market – a clear illustration of the limited volume of activity. Those who re-sell goods report markedly higher revenues, with a median value of SSP 10,000 (33 USD). In line with these patterns, re-sellers also are more likely than others to work out of a stall that is in a fixed concrete or metal structure. It is less evident that there are differences across towns (reported revenue is higher among traders in Bor, but as noted, sample size is small, and there is less confidence in the observed value).

Table 8 Daily revenue of market stalls (SSP)

Daily revenue of market stalls (SSP)

	Median	25th percentile	75th percentile	*Observations*
Agricultural products	3,000	1,000	7,000	*81*
Re-sale	10,000	5,000	20,000	*87*
Services	2,000	1,000	5,000	*25*
Combination of products and services	5,000	2,300	20,000	*51*
All	**5,000**	**2,000**	**15,000**	***244***

Few traders report that they sell anywhere close to what they could offer, and most say they have few customers on a typical day. Market traders typically report that they have between five and 20 customers on a typical day, with a median of ten (only one in four have fewer or more, respectively). There is little variation between towns and across different types of market activities. Market traders are likely to say that they sell much less than what they could offer on a typical day (in line with modest revenues they report). To understand sales, we focus on those who trade in agriculture goods or offer services, and set aside those who engage in re-sale, since their good are not perishable or time-bound. Among this group of traders, about one in four say they typically sell nothing or very little, and more than two thirds to say that they sell less than half (66% among those who offer agriculture products and 74% of those who offer services; Figure 9). A mere 18% of those trading in agriculture products say they sell more than half, and only six percent say they typically sell out (Figure 8). Sales are moderate across all localities in the sample. Particularly low sales of consumer goods and services in Malakal and Rumbek may speak to the early stage recovery is at in these localities.

Figure 8 Daily sales volume, by activity

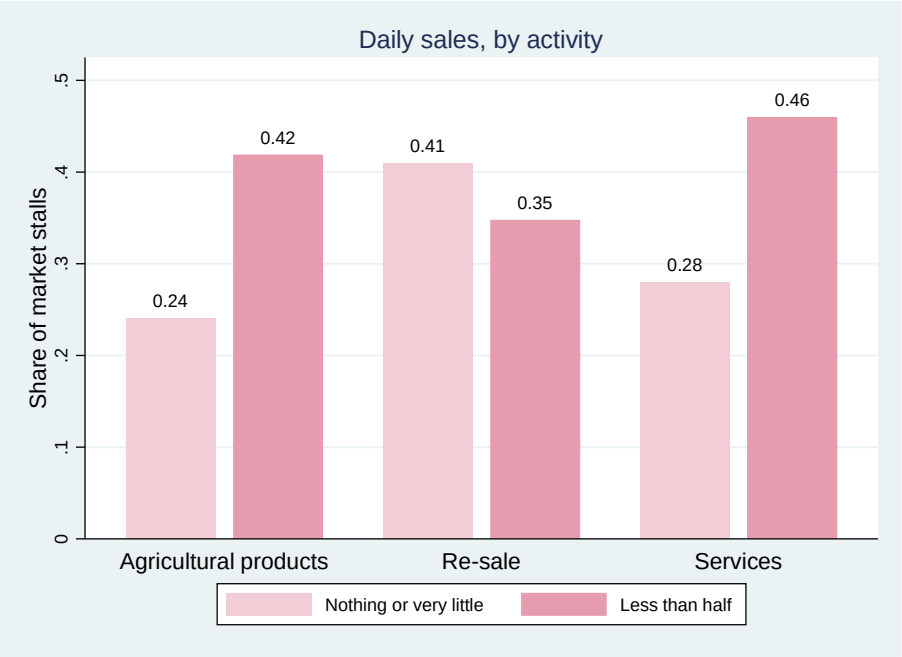
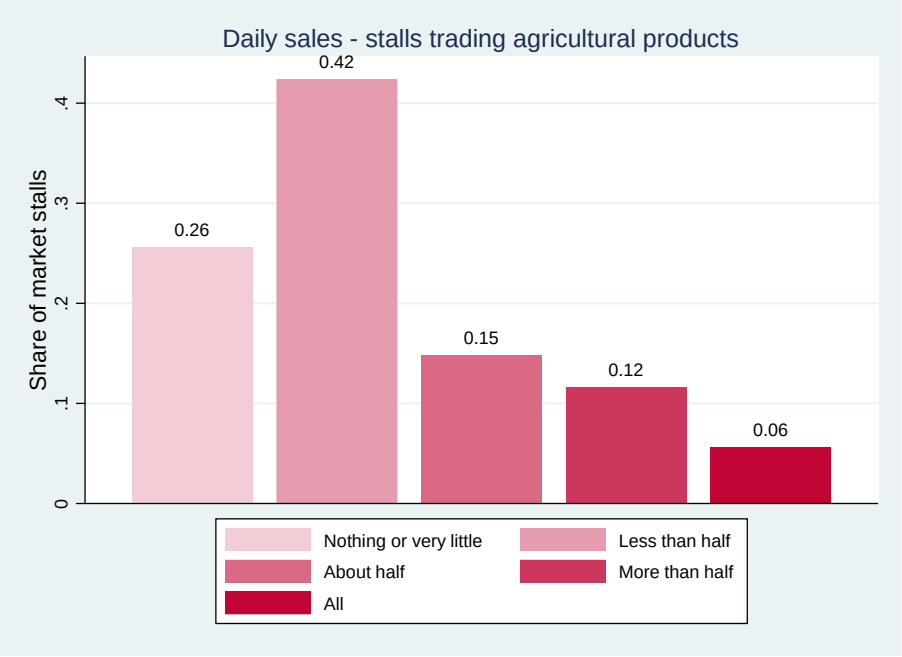


Figure 9 Daily sales volume at stalls trading agricultural products

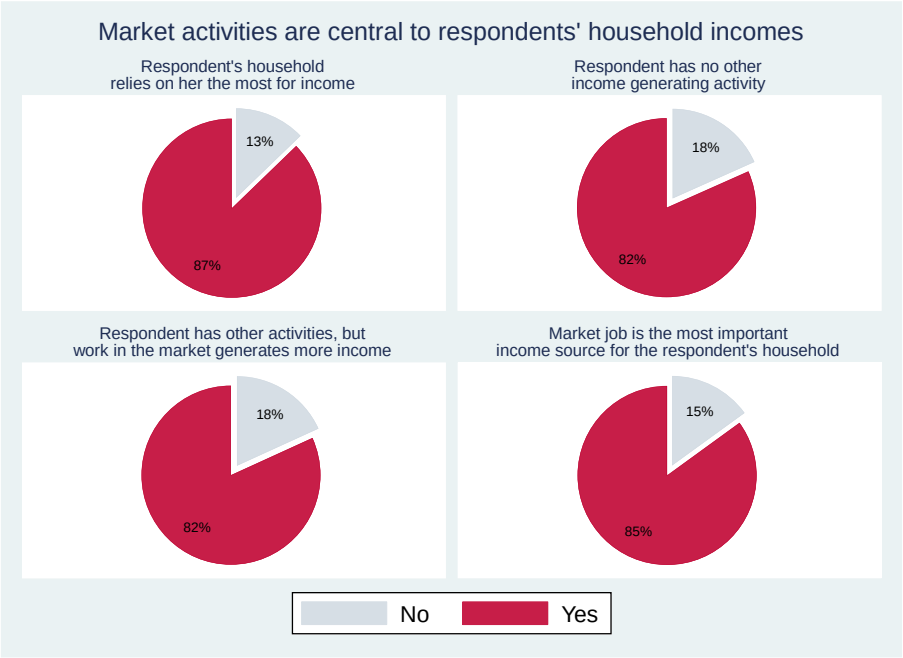


For most market traders, their job in the market is key to their family's livelihood. We asked traders to report revenue rather than profits because in a pilot test of questionnaire, the concept was more easily understood, and more traders felt they were able to report it. We therefore ask a set of additional questions to understand the importance of (unobserved) income from the market activity to traders and their families. We ascertain that four in five traders (82%) have no other job activities, while for the large majority of those who do (82%), the market activity is the most important job they work. At the same

time, seven out of eight traders (87%) say that their households rely most on them for their livelihood (Figure 10). It follows that for six out of seven market traders (85%), running a market stall is the only or most important income generating activity for their families.[49] Given the importance of the market activities to livelihoods, respondents overwhelmingly say that they come to the market daily (96%) and throughout the year (95%).

Despite low revenues, most market traders say that their current activity is as least as productive as any previous jobs they had. An unexpected pattern speaks to the importance of jobs market as income-generating activities. Most market traders have started their activities recently. At the same time, few say that they previously had more lucrative job activities – that is, many of those who have recently started trading in the market view this activity as at least as good as their previous ones. Thus, overall, only one in ten market traders (10%) report that they had in the past another activity that was more productive. There is no clear pattern in what kind of activity respondents used to do – some used to trade different products (vegetables, fish, textiles), others used to engage in service activities or held public sector jobs.

Figure 10 Importance of market activity to traders' household incomes



Traders and processors alike report slim profit margins, with earning of a few hundred SSP per transaction. With much competition and considerable transport cost[50], traders report that they can only expect small profit margins. Respondents in Aweil and Torit report earning 2-4% on grain and groundnut

[49] I.e., the respondent's family relies on the respondent for most income, and the market activity is either the respondent's only or most important one.

[50] Trader FGD, Wau "You know the costs that we are facing on the way are falling on the citizens. For example, if I buy one sack of onions in Aweil for 10,000 and I will not come to sell it for 10,000 in Wau, no. I will add up all the costs I have paid on the way on the price and who is going to pay them? It is the citizens."

transactions, about 200 SSP (less than US$ 1) from a sack of grain or nuts.[51] Processors similarly explain that they can expect a few hundred SSP of profit from processing a batch of goods.[52]

Processing jobs are viewed as small-time activities to generate some cash income, rather than as a substantive, full-time job. Results from the youth survey suggested that there are few workers whose primary activity is in processing, that returns are low, and that youth do not view processing very favorably. Given the potential of these activities in South Sudan, this is a somewhat surprising finding. However, it is in line with the way KII and FDG respondents consistently talk about processing activities. Respondents – whether key informants or focus group participants (including processers themselves) – generally describe processing as a small-time activity. At best, respondents discuss processing as a smart way to make some additional money[53], and women in particular take pride in being able to provide for their families through processing activities.[54]

Some respondents think of processing as a last resort when subsistence agriculture fails. While processors can earn some cash income, respondents do not generally speak of it as a desirable and lucrative job. Indeed, some talk about it as a last resort to make a living, even as a fallback beyond subsistence agriculture. Focus group discussants in Rumbek talked about how "life these days is hard. If you don't think you will survive [with the crops you harvested] you have to find ways either to sell alcohol or groundnut paste."[55] Their peers in Torit recalled that "at that time before the conflict, we were cultivating every crop like sesame, sorghum, and many more other crops that we were cultivating." Conflict, however, had changed this, and after many lost their lands and had to move to town to shelter, "we were unable to cultivate enough food crops because there was a shortage of land so we resorted to

[51] Trader FGD, Aweil "The market lost its value since 2013. You can receive a phone call from a customer in Maper (village in Aweil) telling you that he has one sack of sorghum and the buying price is twelve thousand and your profit after it's sold can be three hundred pounds meanwhile; charges for transport is one thousand by motor bike or *karlo* (cart pulled by a donkey) now where is the business here?" Trader FGD, Aweil "Nothing is good at all as I am currently speaking to you; what is left for me is one sack of groundnuts only, I bought it for 5000 pounds and its profit is 200 pounds." Trader FGD, Torit "[I get my goods] from Ugandans, I use to buy a sack of maize at 5300 SSP and when I sell at 5500 SSP. I will get 200 SSP, so I am working to get only 200 SSP as income."

[52] Processor FGD, Rumbek "Because we are here to make profits like if you buy 50 cups of groundnuts, you may get a profit of like 400 SSP from it which will help you to sustain your family's basic needs." Processor FGD, Rumbek "It will then make 40 litres of alcohol which give you like 30,000 SSP. So with this, you may then take the little [profit] from it and give it to your children and them you go again and buy another 50 kilograms again and again, as you keep the profits for your home consumption." Compare also Processor FGD, Malakal "Currently, people like us engaged in the flour business – I go to the market and buy 10 kilograms. Usually, I get 5,500 SSP on good market days. Out of the 5,500 SSP, I put back 4,500 SSP. From the 1000 SSP [profit], I deduct charcoal, oil, salt plus my labor – nothing is left. We only make money for the person who sells flour." Processor FGD, Malakal "I am a baker; we buy the flour from the market to bake bread. The flour is brought to from different locations: from Juba and from [Sudan]. There is no local flour. One bag of flour costs 20,000 SSP. Add to that yeast and other expenses like firewood, oil, rent, in addition to the workers. A bag of flour costs 20,000 SSP … plus other expenses … for 8,000 SSP. A bag (of flour) makes 1,400 loban [local baked goods]. When we multiply that, you will get 28,000 SSP. We are working, but there is no profit."

[53] Female Farmer FGD, Bor "Apart from farming, actually we earn money from the firewood that we collect from the forest and take them to the market for selling" "Apart from farming, we can also go to cut grass for thatching (to make houses) so that those who fear to go to the forest can buy with their money and this is how we survive sometimes" Male Farmer FGD, Bor "when you harvest a lot you (women) can use some to make local beer in order to sell it so that you have income instead of letting the grains get spoiled." Male Farmer FGD, Rumbek "Even some boys go to the nearby bushes to collect firewood using their bicycles so that it can earn him some money."

[54] Female Farmer FGD, Rumbek "some do have groundnuts in surplus or bought from the market that they process it to paste and take it to the market to support the family. If the demand for groundnut paste increases, you will keep doing it to cater for your family most of the time." Processor FGD, Wau "We as women we have a lot of things to do e.g. processing paste, okra. We as women we are ones who stand firm in our families since you know most of our children are orphans so we are doing these so that one can eat and drink."

[55] Female Farmer FGD, Rumbek

brewing alcohol for survival."[56] Processors in Rumbek similarly referred to "things that we used to do; when the rain falls, you then go to the garden and then cultivate your crops like sorghum and groundnuts and then you harvest them and finally put them in your granary. That was the life we were living before the conflict; but now, we no longer practice them so we resorted to selling tea on the road side, others ferment alcohol, others do processing of groundnuts and fish for our children's survival."[57] Women in Wau simply considered that: "you process the products to bring you money. It's our guarantee if there is nothing else, and this is our work."[58]

4. What are the key obstacles market traders face in their business?

Market traders consistently point to lack of funds, bad and dangerous roads, low demand, and inflation as their worst problems

Market traders consistently view a lack of funds, bad and dangerous rods, low demand, and inflation as their most prominent obstacles. Respondents generally perceive there to be many obstacles to their market activities. However, they are both selective and consistent in what they describe as 'severe problems.' Three constraints are most frequently named, each by about one in three traders: bad or dangerous roads, lack of customers, and inflation[59] (Figure 11). These three obstacles are also frequently viewed as 'the biggest problem'. At the same time, market traders are most likely to feel that lack of funding is their biggest obstacle, but not very likely to cite it as a severe problem.

The same four obstacles return as the key concerns of market traders across towns, with somewhat of a different emphasis. Looking at the three most frequently mentioned constraints across each town, it is striking that they are all among the four crucial constraints listed above, with the one addition of poor input availability (which, of course, relates to insecurity and bad roads). Nearly all market traders in Juba (94%) cite either lack of funds, inflation, or lack of customers (Figure 11). In Malakal, traders are far and away most likely to complain about a lack of funding (49%, compared to 12% citing the next-most frequently referenced constraint). Traders in Bor and Rumbek particularly stress bad and dangerous roads, and poor input availability. Those in Wau are most concerned about a lack of customers and bad roads.

Despite the obstacles they faced, traders at survey time in Fall 2019 expressed optimism for the coming three years – but more so on the security situation than on an expansion of their opportunities. Our market survey was carried out in September 2019, at a time when fighting in South Sudan was limited, but no unity government had yet been formed. When asked what they expected for the coming three years, the majority of traders were upbeat (Figure 12). Nine out of ten (89%) expected the security situation to improve. About six in ten were hopeful for higher demand for their goods and services (61%) and lower competition (58%). However, one in four believed that there would be no change in the current

[56] Female Farmer FGD, Torit

[57] Processor FGD, Rumbek

[58] Female Farmer FGD, Wau

[59] The market trader survey did not ask traders what it is about inflation that made their business activities difficult. However, a survey of foreign businesses in 2019 pursued this question. Businesses (at the median, micro-businesses), most frequently say that the key impact is loss of purchasing power among customers (73%), followed by the risk of losses from regular business activity (68%). Somewhat less frequently, they point to difficulties in findings suppliers (55%). World Bank (2020d).

situation on demand and competition, and nearly one in five (18%) did fear that competition was likely to increase.

Figure 11 Perceived obstacles to running market activities

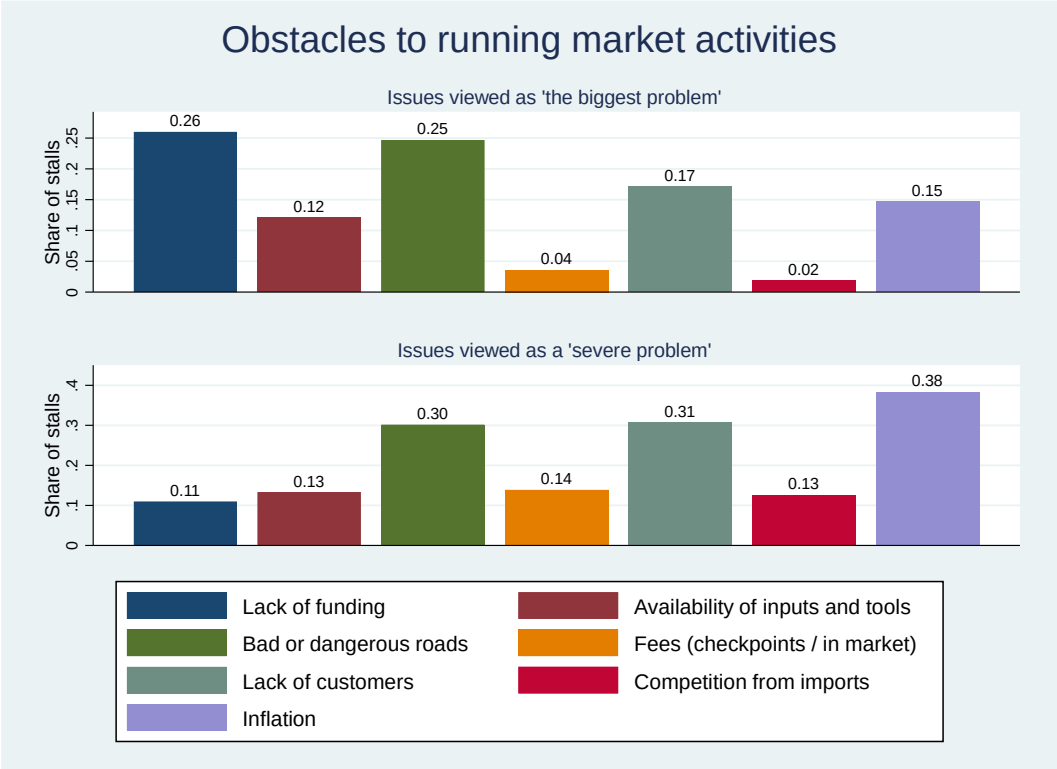


Figure 12 Market traders' expectations for the coming three years

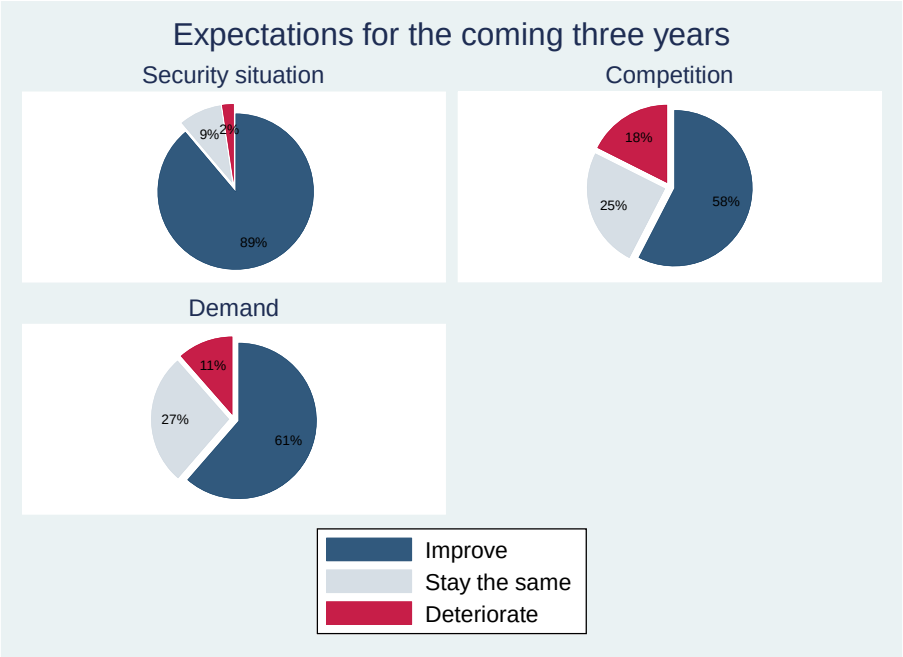


Table 9 Most frequently cited key business obstacles, by town

Biggest perceived obstacles, by town

	All	Juba	Bor	Malakal	Rumbek	Wau
Most frequently mentioned obstacle	Lack of funding (26%)	Lack of funding (41%)	Bad or dangerous roads (46%)	Lack of funding (49%)	Bad or dangerous roads (36%)	Lack of customers (29%)
Second-most frequently mentioned obstacle	Bad or dangerous roads (25%)	Inflation and exchange rate (30%)	Poor input availability (26%)	Inflation and exchange rate (12%)	Poor input availability (21%)	Bad or dangerous roads (28%)
Third-most frequently mentioned obstacle	Lack of customers (17%)	Lack of customers (23%)	Lack of funding (11%)	Lack of customers (11%)	Lack of customers (16%)	Inflation and exchange rate (18%)
Share of answers citing one of the three most common obstacles	68%	94%	83%	72%	72%	75%

Insecurity and checkpoints obstruct market activity

A majority of market traders who transport goods between towns and villages say they have recently feared for their security on the road, and security concerns affect the decision to travel for business. A majority (58%) of all market traders say they have been recently concerned for their security on the road. More crucially, this share is particularly high among those who transport goods from other towns. Nearly three quarters (72%) of these market traders fear for their safety on the road. It is also higher among those who transport goods from the villages, among whom two out of three (66%) are concerned for their safety. Security fears on the road are most pronounced among traders in Juba (69%) and Malakal (66%), and noticeably lower in Wau (41%). About one in four traders (24%) who are concerned for their safety on the road say that their worries sometimes (19%) or often (5%) affect their decision to go travel for business.

For traders, insecurity on the roads continues to pose real danger, raises cost, and gives an edge to those with access to capital. Conflict profoundly disrupted trade across South Sudan. As a trader in Aweil recalls: "Whenever you heard that groundnuts or sorghum is cheap in Rumbek or Wau we run to those states, not forgetting Yambio. But when the 2013 crises started, no Dinka could go up to Yambio; you could be killed and have your goods taken before reaching to the destination."[60] When qualitative interviews were conducted in June 2019,traders in a number of localities argued that security on the road

[60] Trader FGD, Aweil

had recently improved.[61] However, others reported of continued security difficulties.[62] Traders consider that it is part of their job to take risks[63], but they tell two different stories about how traders deal with security obstacles. Some say that those with capital have left to pursue opportunities in safer places, and that only those without other options remain.[64] Others, however, explain that dealing with the risk of losing goods on the road requires capital, and limits the circle of traders able to go between towns: "you have to put [up] part of your capital in order to take risks and you also save part of it because when losses happen, part of the money you have saved will be available so it doesn't mean when there is insecurity one has to stop operating business but one has to be very conscious."[65]

Checkpoints impose significant cost on traders who travel between towns and contribute to high prices. Only three out of ten traders (31%) who work within towns only or transport goods from villages report that on the way to the market, they pass roadblocks or checkpoints at which they must pay. However, six out of ten (60%) of those who travel between towns do. Market traders report that at the median, they expect to pay 5,000 SSP (about 17 USD) to pass a checkpoint or roadblock. There is a very substantial range of answers (one in four reporting they pay less than 2,000, and one in four saying they pay more than 15,000). Fees could easily add up for traders. For instance, two in five traders pass at least four checkpoints when traveling between towns (Figure 13). Assuming the traders pays the median fee at each check point, the total would amount to an SSP 20,000 fee (about $67), equivalent to four times the median daily revenue. In focus group discussions, traders were vocal about the need for the government to rein in fees that have to be paid along the road. Respondents also explicitly made the link between fees and high consumer prices. For instance, a discussant in Renk reported: "if you load a land cruiser [with goods], they can demand 10,000 SSP [at a checkpoint] if they are merciful … Hence, when you reach the market, you have to demand high prices for your goods to compensate for all the taxes you incurred on the way to the market."[66]

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[61] Trader's Association KII, Malakal "There is a small change. This year the boats came from Juba. Secondly the road of Juba also, the other way north wards from Renk was the only road goods came by, from the direction of Renk via the Salam (peace) road; but this year the road this side opened and brought goods in large quantities." Trader FGD, Torit "Before, goods were expensive because there was a shortage in the market due to the fact that there was insecurity on the roads and also the roads were bad but now [goods] are cheap mostly because the roads are passable, there are no rebels on the roads, the few challenges we [still] face are the conditions of the roads, if the roads could be okay, everything would be simple because before robbers used to rob traders on the roads but now this is not happening anymore." Male Farmer FGD, Renk "There used to be Sudanese traders before the war, but then they left; but nowadays they are coming back to buy at the border."

[62] Trader FGD, Renk "I started my business by importing goods like sugar and some clothes from Khartoum and selling them in Renk and if I didn't get a good market in Renk, I would travel to Paloch and from Paloch to Maban sometimes. Since the war broke out, the roads have been blocked and we are selling them in Renk right now as I talk to you. So, this is affecting us tremendously because we are so many and the goods are not moving elsewhere." Farmer FGD, Malakal "… there were wholesalers before [the conflict] and even we depended on them but the outbreak of the conflict led them to fear (for their lives) that is why the number of wholesalers and people with enough capital who are supposed to bring the goods in large quantities has dropped, so only few people are coming with the products." Trader Association KII, Malakal "The boats come (from Juba) sometimes but the situation is still bad, many things are stolen along the way." "Many people were affected as their goods were robbed on the road and other goods reached but other goods didn't arrive." Trader FGD, Aweil "Roads are spoiled by rain. Among all those points the important thing is to have peace among ourselves; to move from one place to another without fear."

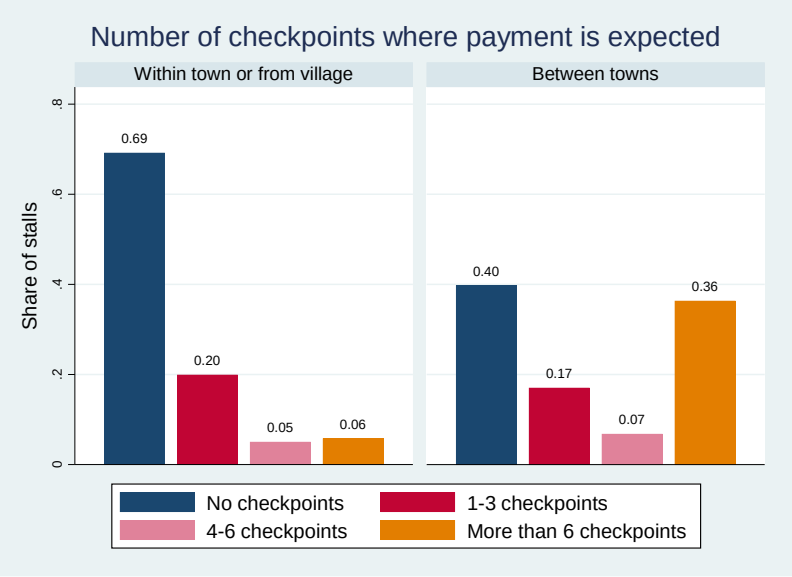
[63] Trader's Association KII, Malakal "[routes were closed before because] it was the problem of the insecurity. Even up until now it's there but the trader tries his luck." Trader's Association KII, Juba "… sometimes it depends on your luck, you can find a lot of obstacles on your way, like maybe an attack or something like that. That is the job of traders, they have to take risks whether that means they lose or gain a profit."

[64] Trader FGD, Malakal "… after the conflict, now the traders are few because of the issue of capital. The ones who are left behind are those who don't have enough capital, if we could have capital, all of us would have gone but we remained behind because we have nothing."

[65] Trader's Association KII, Wau

[66] Trader FGD, Renk.

Figure 13 Number of checkpoints at which traders must make payments on the way to the market

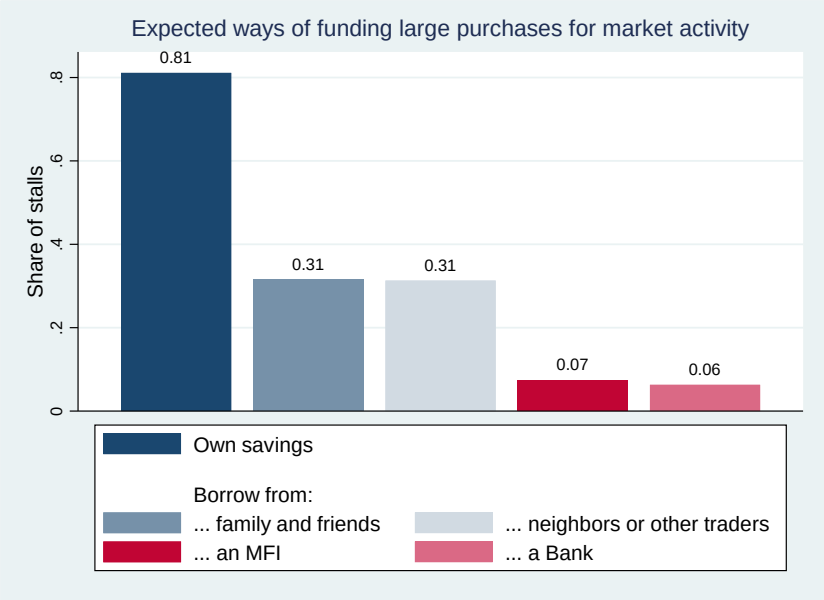


Market traders face minimal access to finance, high inflation, and market fees that eat into their revenue

Very few market traders would expect to finance large purchases by borrowing formally, while most say they would rely on their own savings, and perhaps borrowing from family and peers. Asked about how they might finance a (hypothetical) large purchase for their market activity, only one in nine market traders (11%) say they would consider borrowing either from a commercial bank (6%) or MFI (7%; Figure 14). By way of contrast, four in five would expect to rely on own savings (81%), and about three in ten say they might borrow from family and friends (31%), or from neighbors and other traders (31%). It is worth noting that traders with higher revenue are on more likely to consider taking formal loans. Even among traders in Juba, fewer than one in five traders expect to rely on borrowing from formal lenders (18%), including no more than one in every four who re-sell consumer commodities (23%) or offer services (25%) – although those are the traders most likely to look to financial institutions. This pattern is in line with very low use of the formal financial system even among established firms (World Bank, forthcoming), and speaks to the low level of development of access to finance.

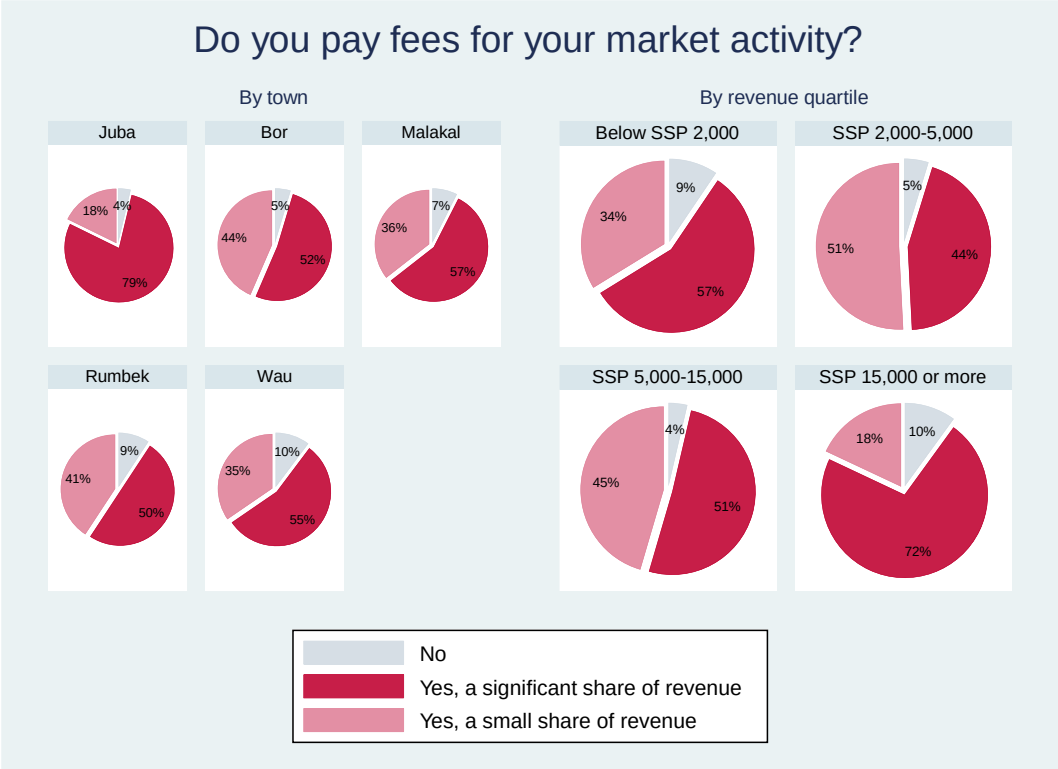
Traders who are foreign nationals report less problems in accessing funding, because of a greater ability to borrow family and professional networks. South Sudanese traders are about twice as likely to say that access to funding is their principal business obstacle (33%) than foreign traders (15%). When accounting for location and differences between those who trade in agricultural products and other goods, South Sudanese traders are still twelve percentage points more likely to report such an obstacle. Interestingly, the lesser difficulties foreign traders report has little to do with greater use of formal borrowing: a mere six (seven) percent of foreign traders say they are likely to borrow from banks (MFIs). Rather, foreign traders have greater ability to borrow from family (39%, compared to 26% among South Sudanese) or neighbors and fellow traders (41% and 25%). This is indicative of the relatively greater wealth and liquidity within the networks of foreign traders.

Figure 14 Expected ways of funding a (hypothetical) large purchase



Most market traders pay fees to operate in the market, and a majority say that fees amount to a significant share of revenue – particularly in Juba. Nearly all market traders in any locality say they pay fees or taxes for their market activity (93%), and more than half (58%) say they add up to a significant share of their revenue (Figure 15). Market traders in the capital in particular face demands for payments: four in five (79%) say that such fees and taxes amount to a significant share of their revenue. Outside of Juba, about half (53%) say this is the case. Nor are small-time traders exempt from paying what are to them significant sums. While those with the highest revenues are most likely to say that they pay a significant share of revenue (72%), more than half of those with the lowest revenues (no more than about US$6.50 per day) agree. Given that fees are likely to make it harder for traders to make a living and to depress market activity, Government should closely scrutinize whether the revenue raised is put to the kind of use that justifies the collecting it.

Figure 15 Fees paid for market activity, by town and revenue



With more stalls opening, little diversification, and low purchasing power among buyers, market traders face intense competition

Traders nearly universally say that they have many direct competitors, though those who offer services and artisanal goods are less likely to face a crowded field. As is to be expected (or feared) given the low degree of diversification in goods and services, most market traders (90%) say that there are many others in the market who offer the same goods and services as they do (Figure 16). The share is notably lower for those who offer services or make artisanal products (73%). By way of contrast with other towns, it is particularly low in Malakal among those re-selling consumer goods (65%) or offering services (40%) – again plausibly in line with the early state of recovery of the market (Figure 17).

Figure 16 Number of vendors in the market who offer the same goods and services as the respondent, by activity

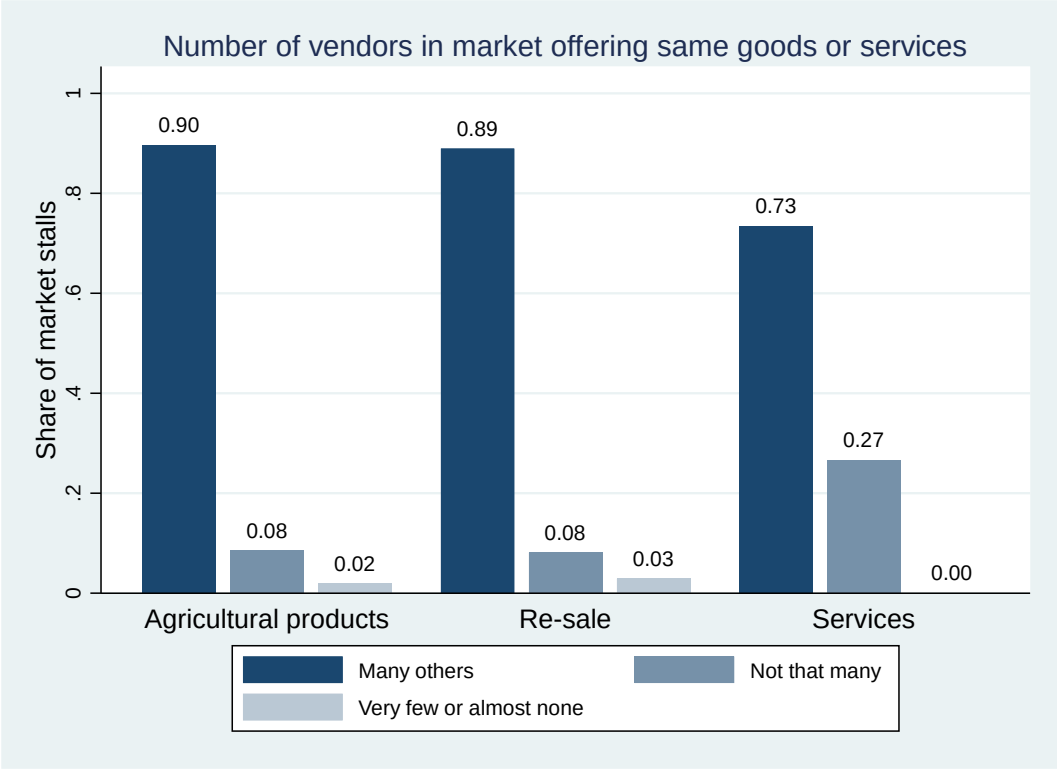
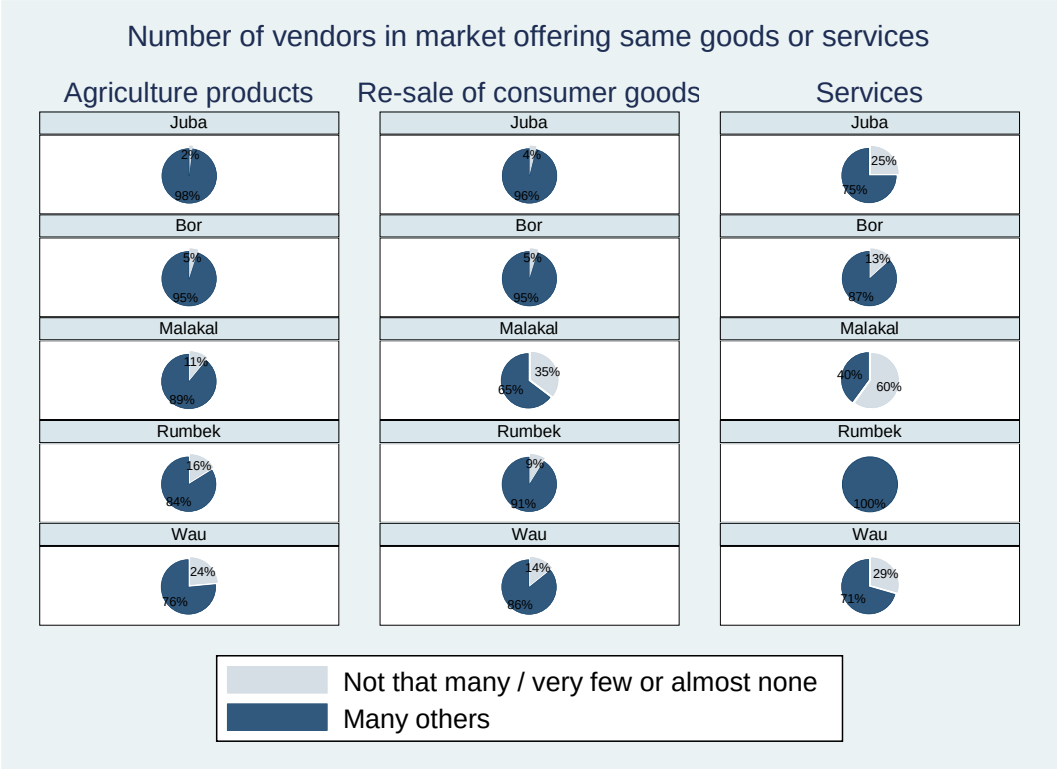


Figure 17 Number of vendors in the market who offer the same goods and services as the respondent, by town and activity



Even as there is limited supply in the market, farmers, processors, and traders agree that customers are cash-strapped, and it is hard to find buyers for their products. Those who take goods to the market are vocal about the difficulty of finding customers. Farmers in Yambio discussed the issue, with one explaining that "as we talk now with you, we have too much maize with us as farmers and nobody is buying and there is no place where we can take that maize to sell, only among ourselves and you go to sell for a small amount of money and the price is low."[67] Along with displacement[68], those active in the market attribute this to the low purchasing power of customers. A farmer in Wau asks "Sometimes you may have some crops you need to sell but where will you get people who have money? Now there are people who want some products but there is no money. So, these are the effects of the conflict."[69] Respondents in Malakal pointed out that there was more activity in selling green leafy vegetables than other crops because customers were able to afford them.[70]

> ***"Sometimes you may have some crops you need to sell but where will you get people who have money? Now there are people who want some products but there is no money. So, these are the effects of the conflict."***
> *Farmer, Wau*

Bad roads and an absence of customers who can buy wholesale contribute to weak demand. In addition to low purchasing power, market traders explained that their ability to sell had suffered because it was difficult for them to go to other markets to find customers, and for customers to come to town. A processor in Aweil argued: "Business operates well when you move to many different market locations but when you stay in one place, you don't sell out many goods. The problem is transport but we sell a lot of products during the market days in different location."[71] A further limitation to demand arises from the

[67] Male Farmer FGD, Yambio "I am a farmer. We do cultivate crops, surely like how my colleagues are saying, nothing is right because we can cultivate crops in big quantities and plant maize in big quantities and plant groundnuts in big quantities, but there is nobody who can come to buy them from us." "We cultivate farms and produce a good harvest but even if you produce a lot, you cannot sell it and get money." "I have spent 5 years on garden cultivation even right now I have 3 feddan of cassava, which is there but what I can do with it? I do not know if I sell here I am going to sell at such a low price that it cannot help. That is what is happening." "I am in a cooperative and surely, we planted maize last year and got maize, but nobody has come to buy it from us. It's only us who distributed it among ourselves and ate it without reaping its benefit. This [year] now, we are trying different things like rearing pigs and planting pineapples." "As we talk now with you, we have too much maize with us as farmers and nobody is buying and there is no place where we can take that maize to sell, only among ourselves and you go to sell for a small amount of money and the price is low."

[68] Male Traders FGD, Renk "There is a dramatic change, I'm still selling the same goods but there are no customers because many people are in the UNMISS camps and others fled from South Sudan to neighboring countries. The roads are also blocked and no outlets for goods like roads to Nasir and other areas are blocked because of fear."

[69] Male Farmer FGD, Wau. Compare also Traders FGD, Wau "There is a big change since 2013 because before the 2013 conflict, I sold out 10 sacks of sugar in a day but now I am selling out only 2 sacks of sugar which means there is a change." "We have citizens and small traders who buy from us and before things were very cheap and now things are getting expensive. For example, if the person was eating 3 times a day he/she now is getting one or two in a day because his budget will not allow him to buy things in the market and that is why there is a change."

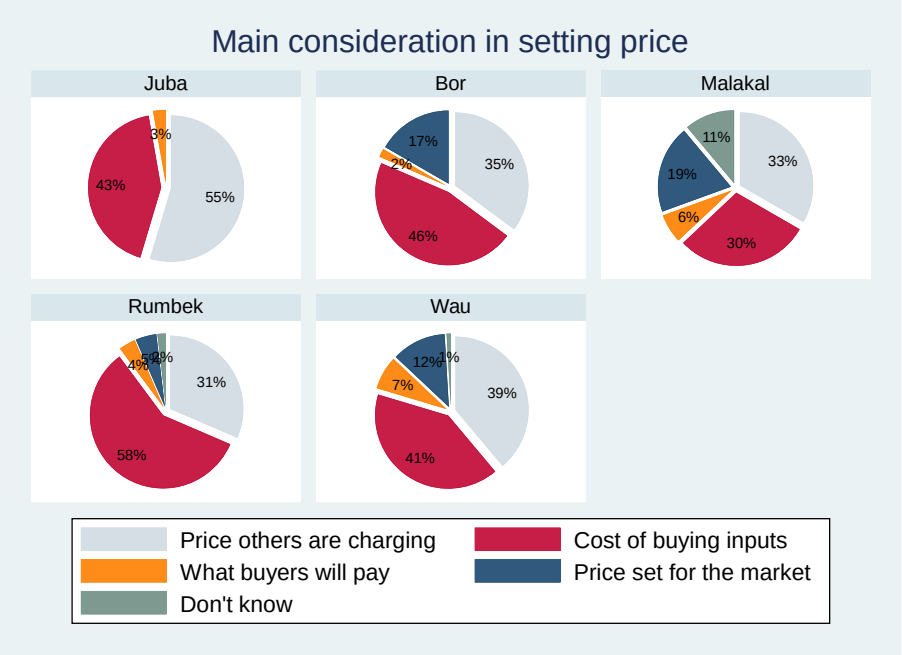
[70] CAD KII, Malakal "Nowadays, many people consume kudura (greens) and bamia (okra) and many farmers grow them. They are cheap, many people do not have enough money so, they buy them at affordable prices and this can match with the life of common citizens. For instance, one bundle of kudura (greens) ranges from 150-200 SSP." Female farmer FGD, Malakal "Before we were growing maize and sorghum but now we grow kudra (greens), sukuma wiki (kale), cucumber, and other vegetables.

[71] Processor FGD, Aweil. Compare also Male Farmers FGD, Renk "I had many branches. As I told you, the war has destroyed everything. My base was in Renk and other branches in Kaka, Fashoda, Wau and Malakal; all these branches got closed down and just operating in Renk only; and the customers just come from Juba and it's very rare even for them [to come]. People have to wait for these few customers and sometimes the owners of local restaurant can buy a little from me yet, cannot feel that I'm selling the goods. Unfortunately the goods get expired and I can just dispose of them because I can sell expired goods that are unfit for human consumption."

absence of wholesale customers. A farmer in Yambio complained that "there is nobody who comes to buy in big quantities, only one by one. We can cultivate crops in big quantities, but there is nobody who can come to buy the crops [in big quantities] from us. If [crops] are bought from us at a fair price, it can help us to register our children in school. Now we must sell small amounts for a low price; that is why we are suffering."[72]

Price setting reflects competitive pressure, mark-ups over input cost, and official prices set for the market. As an additional way of understanding the competitive situation market traders operate in, we ask them about what considerations matter in how they set daily prices. Traders in Juba are most likely to be thinking about the price others in the market are charging – in line with particularly vigorous competition (Figure 18). Competitors are also a consideration for many market traders in the other towns, but they are more likely to think about price setting in terms of a mark-up over the cost of buying goods and inputs. Few traders in any town orient their thinking toward what they think customers will pay (which would be indicative of low competitive pressure). It is noteworthy that in all localities with the exception of Juba, some traders think of official prices set for the market; this is a particularly common consideration in Malakal and Bor, where nearly one in five traders say they mostly consider official prices.

Figure 18 Market traders' main consideration in setting prices



UN and aid organizations contribute to market demand, but could look for a larger role as wholesale buyers

Market traders mostly do business with individual customers, and only a minority deal with businesses, traders, and NGOs. Given high urban poverty and limited purchasing power of households, it is important to ask whether market traders have other potential buyers for their goods – for instance, businesses,

[72] Male Farmer FGD, Yambio. Another respondent explained: "Like what my brothers are saying, we are trying by ourselves to cultivate maize, groundnuts, cassava and some other small vegetables, but the main challenge we are facing is that we do cultivate, but there is nobody to help us to sell wholesale for an amount that can help us." Compare also: Processor FGD, Aweil "It is rare to get a wholesale buyer here but sometimes if you are lucky, someone can come across and buy all of your products."

NGOs, or government entities. Most market stalls (89%) sell to individual customers (Figure 19). For more than three quarters of market traders (77%), individual buyers are the most important type of customer. (Those who say they do not deal with individual customers at all primarily sell to businesses and traders.) About one in four market traders sell to businesses, and about one in ten looks to them as their primary customers. Selling to traders plays a somewhat less important role. One in six market traders (15%) sell to the IGOs or NGOs, and fewer than one in ten (7%) to government entities. These organization rarely (4%) are the primary customer for market traders.

Traders in markets outside of Juba report relying more on sales to businesses, traders, and NGOs. Market stalls in Juba are nearly exclusively geared toward individual customers. Market traders in Wau, by way of contrast, are three times as likely as those in Juba to sell to traders, and four times as likely to rely on traders as their most important customers (Figure 20). (That said, it is still true that four times as many stalls in Wau rely on individual customers rather than traders for most of their business.) Markets in all towns other than Juba are also more likely to have NGOs as customers, and one in four in Malakal report selling mostly to businesses. Stalls that sell different types of goods and services are not very different in the type of clients they sell to.

Figure 19 Types of customers market traders sell to

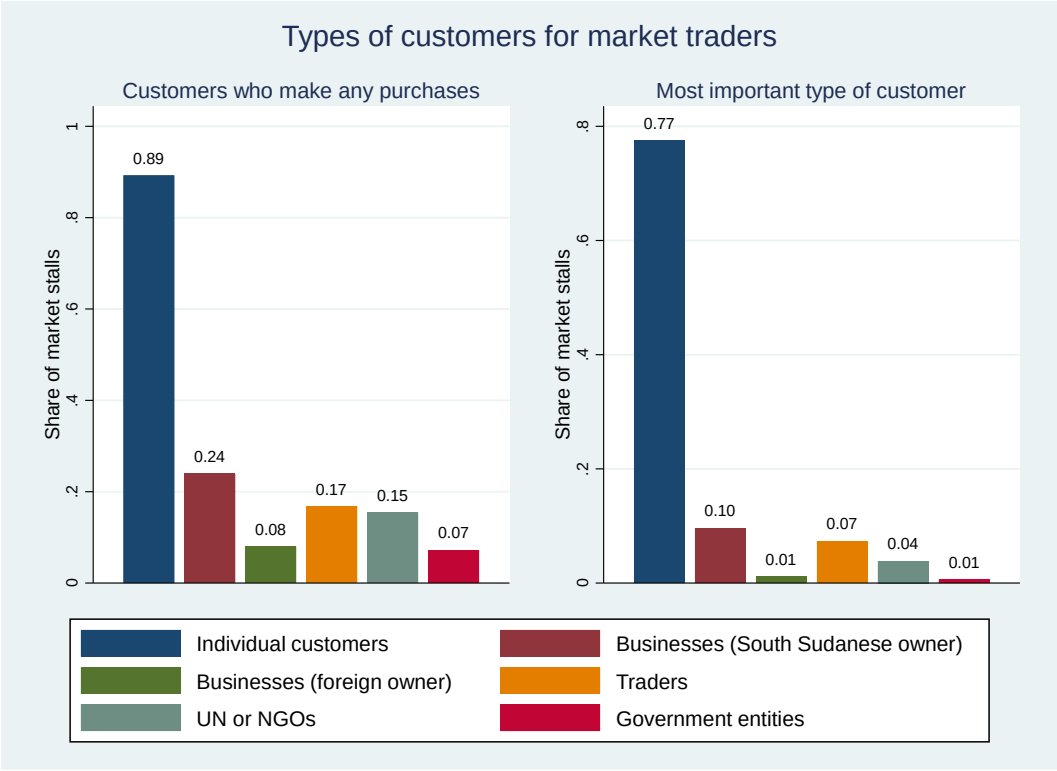
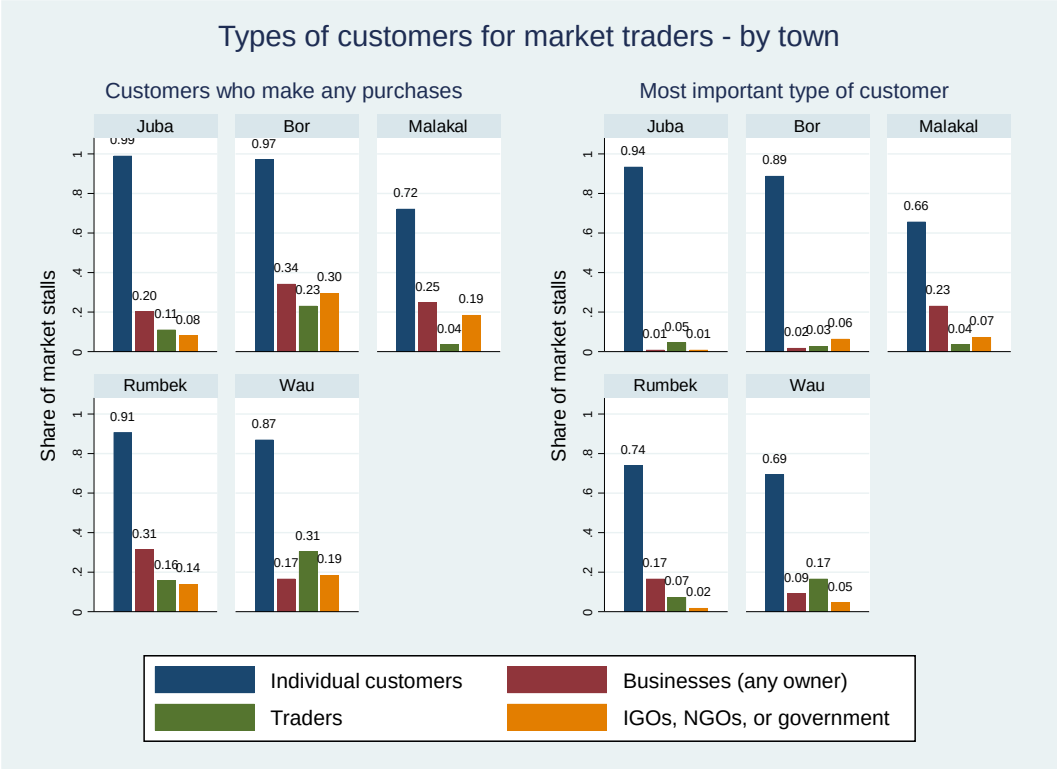


Figure 20 Types of customers market traders sell to, by town



Employees of the UN and humanitarian actors are important customers; public authority employees used to play a similar role, but their purchasing power has decreased with salary arrears. Market traders look to employees of aid organizations as customers who have money to spend. A key informant in Bor explains: "[UN agencies] are important because … they take a large number of employees in Jonglei state. […] They come and buy, and national employees they come also to buy in the market so part of their income comes to the market."[73] While civil servants were viewed in the past as similarly important customers, arrears in paying government salaries and a lack of inflation indexing have eroded their role.[74] A key informant in Aweil explains: "… 2013 has had a huge impact on our lives as traders and the community because [government workers] are not getting their pay cheques at the end of the month, every month; for example, the pay cheques for October 2018 were not received until today in 2019."[75]

Few food traders view UN organizations themselves important customer, though they play a bigger role outside of Juba. We asked market traders directly about their view on the degree to which the UN and other aid organizations contribute to market demand for stalls that say the same products they do. This is intended to help understand how much the UN and aid organizations currently contribute through direct purchases (rather than indirectly, through purchases their employees make for their own

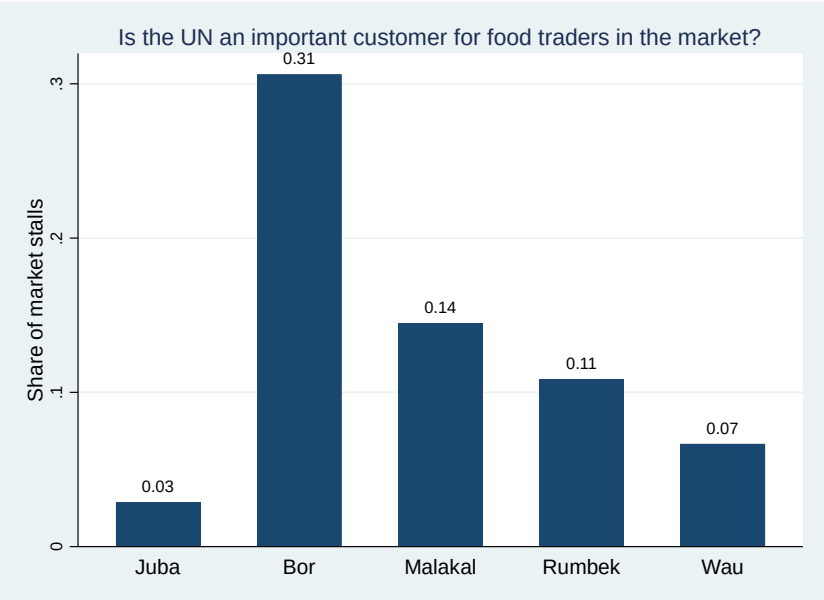
[73] Trader's Association KII, Bor. Compare also: Trader FGD, Malakal "Also people who are working in other offices sometimes they used to come and take our products and pay for them when they receive their salaries." Trader FGD, Rumbek "The employees who are non-whites that are employed by the UN are very important to my business because now they can even give me dollars straight away for me to go and change it"

[74] While the impacts of inflation were discussed in focus groups, the market trader survey did not include a question on the ways in which inflation impacts the respondents' businesses. However, in a survey of foreign businesses (World Bank 2020d), respondents indicated that the key impact was loss of purchasing power among customers (73%), followed by the risk of losses from regular business activity (68%). Both of these impacts are consistent with focus group responses among market traders.

[75] Trader's Association KII, Aweil.

households). Market traders report on some welcome sales from small procurement purchases.[76] However, only one in six traders of agricultural products outside of Juba (and one in eight overall) consider the UN to be an important customer (Figure 21). Those active in the markets in Bor (31%) and Malakal (14%) are most likely to rely on UN organizations as customers – perhaps not surprisingly, given the recency of recovery in the two locations. Given the sense that few traders sell at capacity, it is intriguing to question whether the UN family and humanitarian organizations could play a larger role as customers for those who take agriculture products to market.

Figure 21 Role of UN as an important customer for food traders in the market



Aid organizations play a role as important wholesale customers for farmers and traders in Yambio, but there are difficulties in small producers making sales, price setting, and processing payments. With enormous agricultural potential and a significant international presence, efforts to buy food wholesale in Yambio and Renk (including through South Sudan's Agricultural Bank[77]) are further advanced than in other towns. Respondents discuss the potential for such efforts to help, and identify some challenges. Thus, they note that it is difficult for small producers and traders to directly access the UN or NGOs as buyers.[78] A key informant in Yambio argues that "[international organizations] are important customers, but the

[76] Trader's Association KII, Malakal "We have [aid] organizations. If they have workshops, they sometimes come here to buy products like soda, water, biscuits, and juice". Trader FGD, Malakal "An organization that takes care of the children, they normally come to buy products like clothes, soap and they distribute to the children, they usually take the products and pay the following day." Trader FGD, Yambio "Customers who come from inside Yambio buy from us; those who come from outside like from Juba, Maridi or Rumbek, they come and buy from us. Also UN people, they come and buy from us and take to Juba or Kampala; that is what is happening here with us honey sellers."

[77] Male Farmer FGD, Renk "[Humanitarian] agencies mostly buy from the Agricultural Bank. The Bank buys from us and the NGOs and companies come and buy from it."

[78] Local authority KII, Aweil. A key informant in Aweil believes that "according to UN policies, they are buying things from large farmers like in Renk but what we do here is subsistence farming, not mechanized farming, so UN agencies cannot buy from us because the production is not enough. Female Farmer FGD, Aweil "What we do sell is not enough, so we use to sell to retailers near our market. So, we don't reach NGOs or government." "We use to sell our produce to traders because what we produced was not enough to be sold to the government or NGOs; we sell them only to traders because they are always closer to us." Traders Association KII, Yambio "The big [traders] sell to NGOs, like World Food Program. And the small [traders] sell to local small traders here who are selling it for consumption."

issue is that they have some delays [in payment]."[79] Focus group discussants felt that slow payment posed a real problem for those who sell to aid organizations: "[Some organizations] come to people and say they need maize; the little money that you have you invest into that maize and you supply to them. The payment [from the organizations] will take almost four to five months and the problems that you have increase; people get worn down from supplying to big people like NGOs because when they come to buy something like maize, it takes too much time for them to bring that money."[80] Similarly, while respondents recognize that aid organizations aim to buy at the market price[81], there is a sense that price setting is not transparent.[82] In particular, some respondents explained that producers had expected purchase prices they had agreed in advance with aid organizations to be paid in US dollar, rather than being paid in SSP, and hence, subject to inflation.[83]

5. What is the level of local market integration for agriculture products?

Aggregators and farmers continue to take products to market, but their activity is limited by low supply, danger, high cost, and uncertain rewards

Among those who deal in agricultural goods, about one in three market traders bring goods to the market from other towns, and one in eight travel to villages to buy goods. At the national level, integration of agricultural markets has been constrained since independence by poor roads, fees on the road, fuel price differentials, and trade restrictions. Segmentation has had significant welfare cost. (World Bank, 2017b) As of fall 2019, about one in three traders of agricultural goods (31%) said that they transport goods for their business between the market town and another town or village (Figure 23).

Figure 22). Most of those who do transport goods bring them from another town – one in five market traders, or two-thirds of those who do any transporting. There are distinct trade links for each town. In Malakal, those who transport from another town mostly bring things from Renk. In Juba, traders buy from the markets closer to the Ugandan border. In the other towns, Juba is the main source for market traders. One in eight (13%) traders travel to villages to source goods. They go mostly to villages within no more than about half a day's travel from the marketplace. In Malakal, Rumbek, and Wau, market traders are particularly likely to be active in linking villages and markets, with between one in six and one in five active in buying in villages (Figure 23).

[79] Traders Association KII, Yambio

[80] Processor FGD, Yambio

[81] Processor FGD, Yambio "[An aid organization] is setting a price for us based on the price in the market, for example when they were buying maize here; they were buying at the same price as in the market."

[82] Local authority KII, Yambio "If the time has come for [international organizations] to buy things, they come and give information to the county agriculture department and tell them that they want to buy things from this time to this time or they go to the news and tell [farmers] that they want to buy this crop. Sometimes they send a request to the ministry or county agriculture department for one officer to check which work they are doing. But when they want to buy things according to the market price that is when they don't take an officer to see what they are doing. Because if they take an officer, the officer will see the [offer letter of the international organization] indicating the price they had wanted to buy things for and say why do they want to buy with the market price?"

[83] Local authority KII, Yambio "These partners (international organizations), if they want to buy sometimes they will deceive people and make them think that they are coming to buy maize in dollars. When it is time for them to come and buy in dollars, they change that money; after changing that money they go to the markets and see the prices in the market. If they know how much they are selling a tin for (in the market), they just multiply the number of the tins into 50 kilograms and say they want to buy according to the market price. If you don't accept, go away with it. This is the challenge our farmers are facing, that people come and say they will buy things from our people like this. If they could buy from our people the way they said they would, it would have promoted our people."

Figure 22 Share of market traders dealing in agricultural products who transport goods to the market from out of town

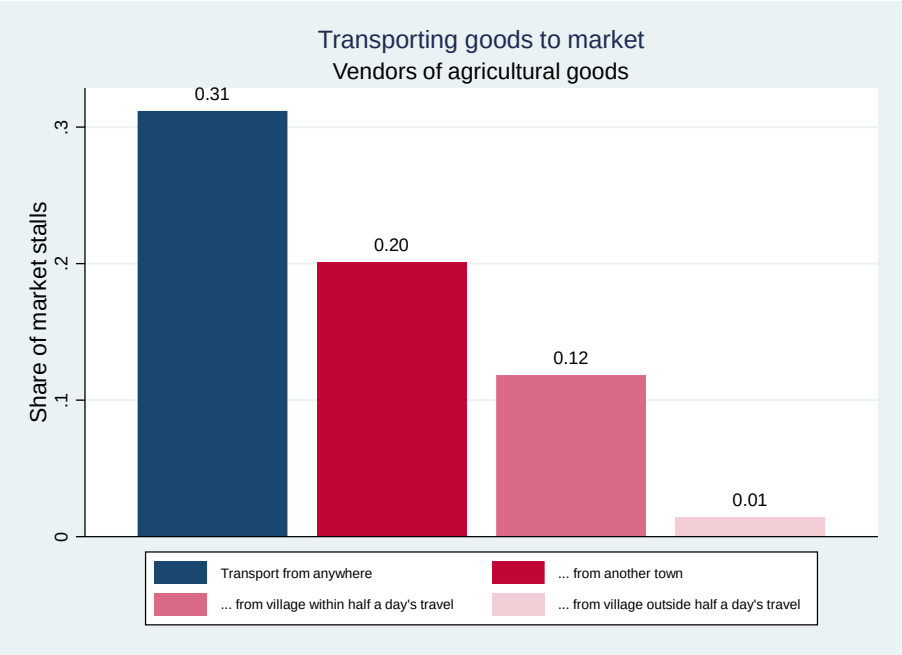
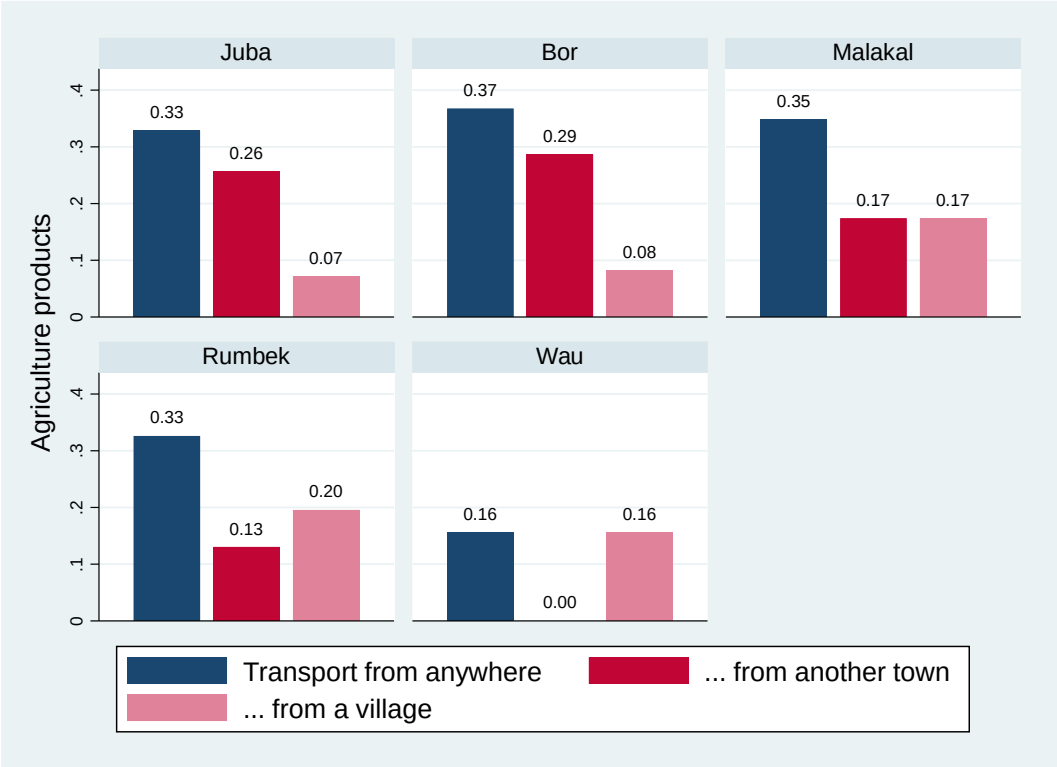


Figure 23 Share of market traders dealing in agricultural products who transport goods to the market, by town



Cars and trucks carry goods for traders between towns, but motorbikes are widely used for transport from villages, and along the Nile river, barges are important. Limited data is available on modes of transportation, since the market survey was not designed to focus on those traders who do transport goods. Transport within town is most commonly on foot, with wheelbarrows or pack animals, by car, or motorbike. Between towns, transport is most commonly by car and truck, or by barge along the Nile river in Bor and Malakal. Those who transport from villages use a more interesting mix of means, most commonly transporting on foot or motorbike – and in the case of Bor and Malakal, again by boat.

Most market traders report that there are aggregators active in their town. The market survey asked respondents whether to their knowledge, there were currently aggregators active in town ('traders who go from farm to farm to buy products'). Among respondents who sell agriculture products, most (85%) felt they had sufficient knowledge to answer the question. Of those who have a view, a majority say that there are aggregators. In Juba, four in five traders of agriculture products agree (79%); in Bor and Wau, a substantial majority think so (68% and 67%). In Rumbek and Malakal, fewer believe there are aggregators (59%), but it is still the majority of respondents. Aggregators known to traders are mostly active in buying vegetables and fruit, as well as groundnuts and grains (Table 10).

Table 10 Agriculture products aggregators trade

What do aggregators trade? (% of respondents who mention a certain good)	
Vegetables	29%
Fruit	27%
Tomato	23%
Groundnuts	18%
Grains	16%
Okra	16%
Onion	6%
Sesame	5%
Greens	5%
Livestock	3%
Fish	3%
Charcoal	1%
Chicken	1%
Milk	1%
Number of respondents	*180*

Some aggregators continue to be active despite danger and poor roads, but the practice is not ubiquitous, and often small-time as well as seasonal. Respondents give a mixed picture of aggregator activity before the conflict, in line with the modest degree of market integration previously reported.[84] Today, aggregators can in principle still hope for high margins: "there are some traders who travel outside the town to Maual Kuel and Arojo area to go and buy groundnuts for an amount of 3000 SSP and if they brought them in the market they will sell them at 4500 SSP for one sack."[85] While some aggregator activity continues, low supply, insecurity[86] and bad roads cause obstacles.[87] For instance, a trader in Bor explains how "Going to the village is difficult as the road conditions are so bad and this is coupled with the insecurity, but you can see we go to the village occasionally during the dry season and when the harvest is done."[88] Similarly, a key informant in Yambio explains that "sometimes some [traders] go [to the villages], but mostly the farmers carry the produce themselves to town, because there is no way a vehicle can reach those locations,"[89] and farmers in Yambio similarly reports that they "bring [crops] to the market. There is nothing [we sell at the farm gate]. Only thing is like tomatoes maybe if it is ready and someone comes to buy from the garden, but if the garden is far you will have to harvest it and bring it to the market here."[90]

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[84] Female Farmer FGD, Renk "Yes we had [aggregators at our farm] before the conflict and they were usually coming to buy our crops." "I only take my groundnuts to market and no one used to come to my farm and buy from there." Female Farmers FGD, Wau "[Before 2013] if somebody needs [your products] and you bring the products near the road, you will find somebody to buy and he asks you for want he wants to buy." Male Farmer FGD, Wau "No, no … we said here before that there is no one who usually comes to buy our products from our farms."

[85] Trader's Association KII, Aweil. Compare also Local Authority KII, Yambio "sometimes [aggregators] go to the small markets outside where the prices are cheap and buy from there and come and sell them in the main market here where the price is high."

[86] Processor FGD, Bor "Even getting the motorcycle man to take you there also is a challenge, everyone fears going on such roads." Trader FGD, Bor "There is cases of insecurity, in particularly when you are moving from Bor to Panyagor there is insecurity. The insecurity is from Panyagor to Duk. Sometimes people will be killed on the road by unknown gunmen or will be looted." Local Authority KII, Torit "Yeah people do go (source from villages). […] But if you move, you will see there are homes with no people. People ran away and there are gaps between villages. So you will find you cannot do the normal trading like you used to. You cannot move far if you want chicken. When villages were so close together, they were linked and it reached very far to the main market. Processors FGD, Wau "We are really afraid to move in the villages because sometimes, someone may come from nowhere to attack you." Processor FGD, Yambio "It is dangerous of course [to move between the villages]" "When the distance out of town is 5 km or 10 km, you will be afraid. Especially around places like Saura, up to date people are still afraid, because Saura was the military base for the people who were in the bush fighting with the government"

[87] Trader FGD, Bor "At the time when rains are falling, it is difficult to access villages because the roads normally get flooded and people have to walk on foot to Baidit, Makuach, Anyidi payams even up to Twic, East county." CAD KII, Juba "If you can see our road which is connecting also to some, our areas of farming, it's not all that clear, farmers are really struggling, even if there are people who wanted to go and buy, then road accessibility is not all that fine." [sic] Male Farmer FGD, Juba "When it reaches the month of September even you will not be able be to come here! This entire place will be flooded with flowing water, and there will be no way/road for coming here. These people here will be carrying crops on their heads up to the road junction there."

[88] Trader FGD, Bor

[89] Traders Association KII

[90] Male Farmer FGD, Yambio. Additional examples of a lack of activity include the following. Female Farmer FGD, Yambio "There aren't any people who come and (buy) them from us in the farm you take them from the farm to the market and sell them."Processor FGD, Malakal "Since villages are not accessible we buy them (raw materials) in the market." There are also further examples of activity. Trader FGD, Yambio "(Sending money to suppliers in villages) only happens to big traders. For us when our honey finishes, we will go to our suppliers and negotiate and buy from them." "What happens is that we help ourselves, when for instance I can't go to the market outside to buy my new stock, I can give my money to my colleague who goes and buys for me; at times, our good customers that we buy from, if they come to us we can just give them the money." "As my colleague said earlier on, that when you don't have the means to go there (to the village), you can send your friend or when you're there and you run out of money, he can assist and when you get back you will pay back." CAD KII, Bor "There are two ways of selling the produce. There are traders who can go to the field or the local community and collect the produce; buy them there and feed direct. For those who have an ability to come to the market, they came also to the market [inaudible] that's how they are working."

Because of limited aggregator activity, many farmers need to transport their goods to market themselves – but insecurity and bad roads are challenges to them, too. Many respondents explain that, rather than being able to rely on aggregators they need to take their products to the market themselves. However, they face the same obstacles due to insecurity[91] and road conditions[92] as aggregators. For instance, a key respondent in Torit explained that since the conflict "… someone fears to move all alone between the village and the town to sell their produce. They have to move with security personnel. If not, someone will just take it off you."[93] A farmer in Yambio argues that "In the past, if you cultivated and yielded good produce, when you heard that there was a place in need of that produce, whether it was your maize or groundnuts, you could hire a car to go there with your crops to sell; but these years, how could you go with your crops? [Robbers] will destroy your crops or, at times, they will let you go and sell [your crops], and on your way back, they will collect all the money from you."[94] However, the obstacles are not absolute – another farmer in Yambio finds that "It is not hard to go and bring our honey from the village, the issues we were facing before are no longer there now. […] What I can say about this is that it has changed because previously when you're going there, sometimes when you meet with those people on the way they will take the little money or items you have with you, but now you can move without any problems."[95]

For farmers, taking goods to market is not only dangerous, but also costly, and it offers uncertain rewards. Farmers have little access to transport to take goods to market. Hiring others to transport goods is common, but costly. Given low market demand, it can combine with insecurity on the road to make it a risky proposition. As a key informant in Yambio explains: "You can find that the [transporter] will charge highly to take goods to the market. When the farmer will get to the market, sometimes his goods will be bought, and sometimes they will not be bought. And if the price is low, the money [the farmer] used for transport is higher than the money he gets from the market. That is what our farmers are facing."[96]

With market integration disrupted between towns as well as between towns and rural areas, imports of basic foodstuffs compete with local products in the market

As insecurity continues to curtail South Sudan's considerable agricultural potential, imports of basic foodstuffs currently compete with local products in the market. South Sudan is far from being able to produce consumer commodities – at all, or less so at competitive prices. However, given a recovery of production and security on the roads, many of the main agriculture products and foodstuffs sold in the markets could be sourced locally. However, in the current disrupted market, local products compete with imports even of basic grains and vegetables. In order to understand whether local producers can currently hope to compete, our market survey included questions to assess the supply chains for products that can be locally grown, and focus group discussions sought to elicit how traders think about buying imports and

[91] Male Farmers FGD, Renk "The only risk is if you are transporting to places like Malakal and Bor. Mostly the risk is on the way to Bor. Also, if you are going to Malakal there is risk. If you are going to Ulang, there is risk." Male Traders FGD, Renk "Since the war broke out, the roads have been blocked and we are selling them in Renk right now as I talk to you. So, this is affecting us tremendously because we are so many, and the goods are not moving elsewhere." Male farmer FGD, Yambio "Currently there is no way you could go anywhere to look for what you want, because you on the road they will kill you."

[92] Farmer FGD, Aweil "The transportation of yield (crops) to town or homes at this time is impossible because the roads are wet and muddy, so people wait until dry season in February or March where one will be able to hire the vehicle to come and transport them."

[93] Local Authority KII, Torit

[94] Male farmer FGD, Yambio

[95] Trader FGD, Yambio

[96] Local Authority KII, Yambio

local produce. Regrettably, some of the survey questions were poorly understood by respondents, which limits the extent of the analysis. However, some conclusions can be drawn.

Imported and locally sourced agriculture products coexist in the markets; traders are more likely than not to source from South Sudan, but those who sell large volumes imports. The balance between imports and locally sourced goods reflects South Sudan's production deficit, but also surviving agricultural value chains. Traders with the highest revenues tend to import the products they sell: those who import account for 72% of reported revenue from flour and grain sales, and 62% of revenue from fruit and vegetable sales (sample size is very small for this comparison). At the same time, across towns, two in three respondents who sell agriculture goods (67%) say that most or all of their fellow traders who take similar goods to the market mostly sell produce from South Sudan; the balance say that such stalls tend to sell imports (Table 12). There are large differences between towns. Respondents explain that market stalls in Juba and Bor (closer to the border with Uganda than the other markets in our sample) are about as likely to sell produce from South Sudan as they are to sell imported agricultural products (53% and 43%, respectively). In other markets, a much higher share of traders sell produce from South Sudan, although between 10% (Malakal) and 30% (Wau) of market traders say they have at least some competition from imports (Table 11).

Table 11 Share of stalls that offer imported agricultural products in the market

Share of traders dealing in agricultural products who say that products come…

	… from South Sudan in most or all stalls	**… from imports in most or all stalls**
Total	**67%**	**33%**
Juba	53%	47%
Bor	43%	58%
Malakal	90%	10%
Rumbek	77%	22%
Wau	71%	30%

Market traders sell their own fruit and vegetables and source both locally and from wholesalers, but grain traders are less likely to sell their own products or source locally. Table 12 provides more detail on how traders of agricultural products source their goods. Local production is the main source of fruit and vegetables in the markets surveyed. Of market traders who specialize in selling fruit and vegetables, two thirds only sell products they grow themselves (67%). Of those who re-sell products, half report that they buy from local producers (50%), and nearly one third say they buy from aggregators who source from local farmers (30%). However, half of those who re-sell also say that they buy in other markets or stores in other towns (45%) or in the market town itself (25%). (For instance, in Juba traders may buy in the wholesale-oriented markets outside of town, and re-sell in the retail-oriented market at Konyo Konyo.) With few grain and flour traders in the market (18% of all stalls), it is difficult to assess the sourcing of grain. However, it is worth noting that those who sell grain and flour are far less likely than those who sell

fruit and vegetables to be relying on their own production (20%), and those who re-sell buy less from local producers (31%) and aggregators (18%), and more from wholesalers in town (41%) or other towns (41%).

Table 12 Sourcing of agricultural goods

	Grain or flour	Fruit or vegetables
Traders (% of all stalls)	18%	25%
Origin of products		
Own production only	21%	67%
Re-sale only	20%	5%
Own and re-sale	59%	28%
Sourcing for re-sale (several answers possible)		
Farmers (% of re-sellers)	31%	50%
Aggregators (% of re-sellers)	18%	30%
Market or shop in town (% of re-sellers)	41%	25%
Market or shop in other town (% of re-sellers)	41%	45%
Sample size	*95*	*134*

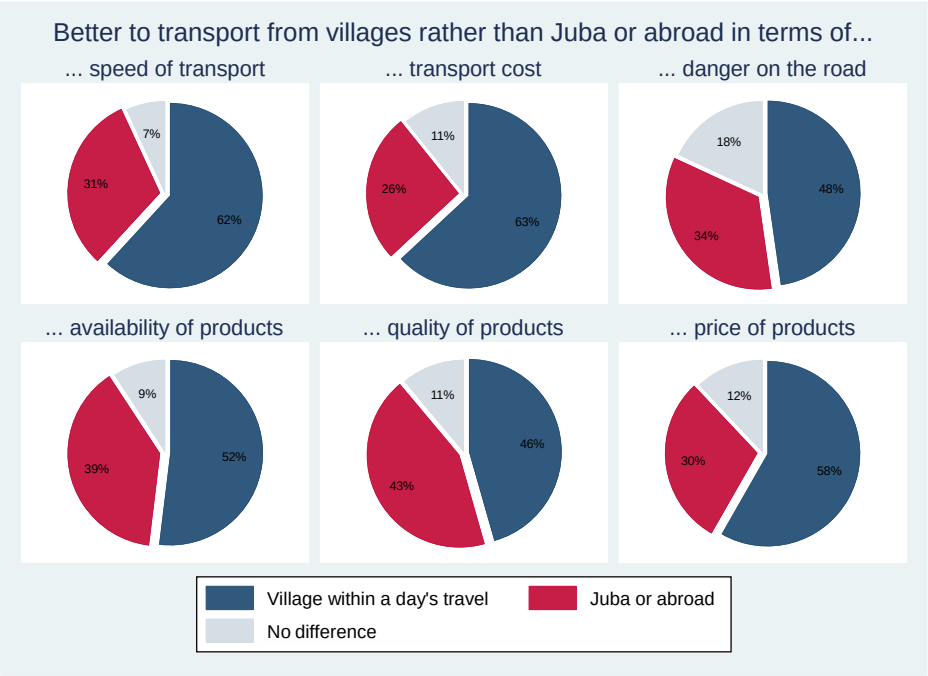
The fact that imports of agriculture products are competitive requires some explanation, given that many of the towns studied are far from markets in neighboring countries, and connected by poor roads. Juba is about 300km by road from Gulu in northern Uganda, and 600km from Kampala. The other markets surveyed in our data are farther north and west – Bor is an additional 225km from Juba, Rumbek 400km, and Wau 625km. Malakal is mainly supplied by boat from Juba and Renk. South Sudan's roads are dangerous, in poor repair, and strewn with checkpoints that require payment. Competitiveness of local produce is also not hampered by wage levels: surveys in 2019 showed daily wages of SSP 500-600 (about USD2 at survey time – World Bank, 2020a), unlike earlier studies that found levels higher than in neighboring countries (World Bank, 2014). Nor does the overvalued official exchange rate appear to impact competitiveness in the market (World Bank, 2020b). It therefore is striking that imports of basic agricultural products can compete in South Sudan's markets. Results from the survey and qualitative data can shed light on this apparent paradox.

At most basic level, insufficient local food production opens a market for imported agriculture products. After years of conflict, the toll on food production is significant. Fundamentally, imports are in the market because there is not enough local production to meet demand. Thus, a key informant in Rumbek simply contended that "… people are surviving from foreign traders, because if they do not bring food items then there is nothing…"[97] A key informant in Bor considered that "we don't have any agriculture production, this is a major problem here in Jonglei [and] South Sudan at large. […] What we do produce is only vegetables which are planted at the river side, but they are not enough. These vegetables are sold

[97] Trader's Association KII, Rumbek. Compare also: Trader FGD, Aweil "I was happy two years ago, why? Because Arabs didn't supply us with any goods like groundnuts or sorghum due to our own raw materials cultivated by farmers here. According to my observation starting from last year up to this year and up to next year; the situation is going to be worse. Those years' farmers were very many but now the number of farmers had reduced."

by small traders. We don't have the capacity to do farming on large scale..."[98] Similarly, a processor in Yambio argued that "we need peace to return, because there are people also in the towns, who do not have the chance to go to rural areas and cultivate … due to conflict and insecurity; it has now reached a point where all food comes from the outside and we buy and eat, but we have the ability to cultivate well."[99]

Figure 24 Trader views on the advantages of sourcing locally or from Juba or abroad



In the wake of conflict, fewer producers and traders store agriculture products, which exacerbates shortages in the planting season and creates further demand for imports. Shortages of locally produced agriculture products are partly seasonal. A decrease in the use of storage facilities exacerbates them. Storage capacity has been lost and destroyed in the conflict.[100] In addition, farmers and other market actors find it risky to store products due to the specter of theft and the possibility of storage facilities in fields and villages becoming inaccessible.[101] In addition to affecting seasonal supply, a lack of storage also

[98] Trader's Association KII, Bor.

[99] Processor FGD, Yambio

[100] Local Authority KII, Juba "From before [the conflict], well now [crop storage] has changed because there is a problem. So much [storage] has been destroyed." Female Farmer FGD, Juba "We used to have a granary, a big granary where we stored our crops before, but we no longer have a granary, so we put them inside drums."

[101] Trader's Association KII, Malakal "If you bought products in large quantities, you can look for a store so that you can keep them in there but when the products you bought can fit your shop, you can just put them there while selling because the security situation cannot allow us to store products; that is why you find that products that are available in the market it's just to meet the demand but storage may be when there is peace in the country. Male Farmer FGD, Juba "If you store your harvest in these granaries, they (people) will break it down and take everything from inside it and take it away or take away the whole granary. Female Farmer FGD, Wau "There are places when you hear there is conflict, you try your best to take your products from there before the thieves arrive and you take it to a place where there is security. Also, you must change the place if there is insecurity to a secure location." Female Farmers FGD, Wau "Previously, people cultivated groundnuts and during the time of harvest you left it there. There is a hut and somebody guarding the place, whenever you need you go and take a little; but now if you cultivate, you take all the products to the town at home." Local Authority KII, Aweil "There are no changes in our storing methods since the war started just people are fearing to store their crops in far places because the fighting may have started from there and you will lose all your crops. Due to that fear they prefer to store their crops at home in case anything happens."

means that many farmers are constrained to selling at (relatively) low prices after harvest, and earn less from their crops than they otherwise could. Respondents in the trader survey did not flag access to storage and other facilities as a prominent concern. However, if and when the constraints that are currently most pressing are addressed, storage is likely to emerge as an important obstacle.

Despite the obstacles, traders see advantages in sourcing from farmers, and no distinct disadvantages. Traders were asked to consider the advantages and drawbacks of sourcing from village as opposed to Juba (for traders outside of Juba) or abroad (for those in Juba). Most feel that buying in villages is faster as well as cheaper in terms of the cost of products and transport (respondents are about twice as likely to say it is better to source from villages in terms of these factor – Figure 24). This compares favorably to replies in a 2017 trader survey, when more than one in five explained that they did not source locally due to the greater cost of doing so (World Bank, 2017a). Respondents are more equivocal about where products are more available or of better quality (about equally likely to favor sourcing from villages or elsewhere).

In addition to low supply of local goods, some traders argue that imports can compete on quality and – with too little local aggregation – on convenience of sourcing. As has been observed in the market survey, imports compete with locally sourced agriculture products on quality as well as availability. For instance, a farmer in Bor explains: "We sell them to those who didn't grow the same type of crops. We don't have fixed prices because it depends on who is buying from you because we have the business people here in town who are selling fresh ones from Uganda so our vegetables are ignored in the market so we lower our prices so that we can get 50 pounds for 3 tomatoes unlike those in the market that sell 3 tomatoes for 100 pounds; we do this because we came from far, you sell your things at cheaper prices and return home earlier."[102] Traders also point out that importing can be a competitive alternative given the poor state of local aggregation and the convenience of sourcing through established networks. Thus, a processor in Torit notes that "we have Magwe, Seretenya, and Ekotos and these are the places that may feed Torit, but the challenges are roads connecting to these places; that is why avocado and pineapple are all brought from Uganda."[103] A trader in Rumbek argues that "I do get my commodities from Uganda because one of the advantages is that I don't pay taxes because I do give my money to the big businessmen who can bring a lot of things from Uganda. That person is the one who can transport and pay taxes along the way to Rumbek here. So, I am free of transport and taxes and buy those commodities at a low cost"[104]

As a result, large and small traders source agricultural products opportunistically, and goods in the market are a mix of imports and local crops. On balance, the remaining production in town and aggregator activity, along with the need for additional supply and established trade networks results in opportunistic sourcing, and a mix of imported and local grown goods in the market. For instance, a trader in Bor explains that "we basically buy commodities at a wholesale prices from Somali traders who import goods from Uganda; and sometimes we get supply from the local farmers who sell the local products at lower prices and this how we work in the market here." Traders in Yambio discuss how the sourcing depends on the product: flour is imported, palm oil is a mix of local an imported goods, cassava locally sourced with some imports, and honey locally sourced.[105]

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[102] Female Farmer FGD, Bor

[103] Processor FGD, Torit

[104] Trader FGD, Rumbek

[105] Trader FGD, Yambio "For flour, we buy from Yambio. Because there are business people who bring it to Yambio [from other towns]… We no longer go to the [local] outside markets like Bazungua." Trader FGD, Yambio "Like the palm oil, sometimes we buy from within (Yambio) because there are people who cook it from here and at times when we go to Nabiapai [a market on the DRC border]. The Congolese also come to that

IV. Policy implications

A return of some more security and revival of primary production are preconditions to the recovery of market-linked agriculture. Insecurity interferes with markets and value chains at every point, from reducing production to depressing demand. Its impact transmits in many ways, from raising transport cost to displacing those with specialized knowledge not easily replaced in the community. The dramatic deficit in food production similarly limits virtually all market activity related to agriculture. Thus, while a gradual recovery of market activity can have beneficial feedback effects on production, some progress in the peace process and resumption of cultivation are a necessary base for market recovery.

Ongoing market and aggregator activity offers a toe-hold for policy to support recovery. The evidence shows that conflict has severely affected markets and market-linked agriculture. However, activity clearly continues. This presents an opportunity for policy to foster additional engagement. For instance, while farmers and processors currently are limited to very small market activities, one can envision support to allow them to modestly expand what they do. It is also likely that, with some recovery in security and production, aggregation could add very significant value. Thus, farmers in some towns express a distinct desire for aggregators to resume their work, and aggregators do take the view that in principle, their business has the potential for considerable margins.

Policy to revive market-linked agriculture must carefully avoid any unintended adverse impacts on food security. The policy options we identify here are not designed with an eye on improving food security. Rather, their goal is to help revive market linkages and opportunities to make some income in the markets. Markets that function better can provide opportunities to farmers and other households, and support recovery of food security. However, policy also needs to tread carefully, consider the potential for unintended consequences, and monitor whether any materialize. For instance, support to local demand could be a boon to farmers and others in the market and set off virtuous cycles of activity. However, if supply cannot expand to meet demand, there is the risk of fueling inflation, as well as of disrupting traditions of mutual assistance (Thomas, 2019). To give another example, it is important for local produce to gradually outcompete imports, but in the current food-insecure situation, it is also important that imports remain available to fill important gaps.

1. **Better security on the roads and some recovery of primary production are preconditions to restoring market activity and market-linked agriculture.** Market-linked activities can support a recovery of agriculture. Yet, conversely, as long as insecurity remains and food production is precarious, fear and scarcity will continue to weigh heavily on market activity. Some tangible reduction in danger and recovery of output can lay the basis of recovery in the markets.
2. **Cash grants could make sense to allow actors along the value chain to take on some minimal risk, but loans are likely not the best approach.** Aggregators, traders, processors, and farmers shy back from small investments both because risk is pervasive, and they have few resources to bear it. Some security risk cannot be alleviated easily. However, small grants can help workers

market and we buy from them." "We mostly buy the cassava flour at the market in Yambio from people who come from far villages and resell it at the market here. If there is no cassava at the market here at all, then we have to go to the village and border markets." Trader FGD, Yambio

"We just stay here in the market and our honey supplier bring the honey to us. But if they are not there, we go to Rimenze or Bangasu to buy honey from there."

overcome other risks. For instance, they can help aggregators take the risk of paying for transport to take goods to market despite the fact that they are uncertain whether they will find supply and willing buyers. Similarly, cash (or perhaps in-kind support) could help farmers and processors inch back into production of a slightly broader variety of goods – and it could help farmers improve storage to spread out supply. Because of the very low asset base and use of credit, it is unlikely that loans would be a promising way to pursue these goals in the short-term.

3. **Support to farmers, processors, and aggregators may be a good way to support the poor in their jobs outcomes.** Most market traders have low revenues, and among them, farmers selling small surplus and processors may be most marginal, and many of them are women. Poverty targeting should investigate working directly with processors. In doing so, it must contend with the fact that many processors view their activity as a less than attractive fallback. It could either directly support farmers in taking goods to market, or indirectly, seek to incentivize aggregators to provide market access.

4. **Farmers' cooperatives could be a lever to restore market-linked agriculture, but capacity and elite capture need close monitoring.** South Sudan has a tradition of strong farmers' cooperatives. While mostly dormant now, these associations could help address many of the constraints that beset market-linked agriculture, for instance, by making a broader range of seeds available, and using the group's bargaining power to provide storage, arrange aggregation and give information on prices. However, cooperatives must rebuild depleted capacity, and guard against elite capture.

5. **If and when food security improves, market links will benefit from a gradual shift of aid focus to diversification.** Agriculture today revolves around a narrow set of crops. As basic production and demand recover, it will be important to revive production of a broader set of goods. This could include support to accessing a broader range of seeds, restoring orchards, providing knowledge lost on former value chains, and re-stocking livestock that is not too dangerous to own. Such efforts must, however, be carefully sequenced with support to recovery in key subsistence crops.

6. **Low demand constraints activity, and it is worth looking to support demand, with a close eye on inflation and ensuring that local producers benefit.** Different market actors agree that it is difficult for them to find customers for their products. It is sensible to look for ways to boost local demand, with the goal of raising the incomes of producers and processors, and of encouraging small investments from them as well as aggregators and traders. These programs must build in careful tracking to make sure they do not unintentionally stoke inflation. A natural starting point is to ensure that public sector salaries are paid and reasonably adapted to inflation. In addition, it is worth exploring a bigger role for local food aid purchases in surplus areas (with a close eye on possible elite capture). A temporary purchase guarantee for aggregators may also be worth exploring. Finally, programs that give cash transfers to support consumption should also consider how they can encourage purchases from local suppliers (for instance, by alerting farmer cooperatives and others to program schedules).

7. **Investment needs for roads are enormous, and priorities should be set with the goal of supporting local production and opening markets in mind.** Bad roads are a severe constraint on market activity and market-linked agriculture. In early recovery, a reasonable way to prioritize is to favor rural access roads to make it easier for farmers and aggregators to take products to

market in food deficit areas, and perhaps, to consider some select inter-state road projects to connect surplus areas to market where local products could compete with imports.

8. **Lifting fees in the market and at road checkpoints would boost market activity, though it is important not to unintentionally aggravate security forces.** Fees in the market and on the road are a significant burden, including on the smallest traders. Those who levy the fees must carefully consider whether the use of the revenue raised in this way justifies imposing this burden. In particular, one would like to relieve small-time producers and traders of this additional hardship. That said, it stands to reason that, in many instances, these fees may be alternative ways of paying security forces that do not receive sufficient salaries. Where this is the case, a serious effort is needed to pay the forces in a way that is less burdensome on the weakest market participants.

9. **Macro-economic policy can promote recovery in the markets by easing inflation, promoting investment in roads, and righting civil service payments.** The difficult macro-economic environment has implications even for modest market activities. The government can immediately ease some of the key obstacles market traders face by abstaining from monetizing deficits, and hence, easing inflation pressure. It can reap huge returns by making sure that some more resource revenue goes to investing in rural access roads. Finally, when civil service salaries are again paid regularly and at reasonable levels, markets will re-gain some of their most reliable customers.

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Appendix A: Decomposing growth in cereal production

Table A.1 WFP/FAO cereal production data

	2011	2012	2013	2014	2015	2016	2017	2018	2019
Net cereal production (thousand tonnes)	563	761	892	1,015	912	826	764	745	818
Area planted (thousand hectare)	860	1,084	1,174	1,014	1,015	940	863	883	930
Farming households (2020 imputed from growth rate)	1,142,179	1,210,001	1,332,867	1,022,137	1,080,733	1,054,686	1001785	1,022,276	1,075,434
Yield (tonnes per hectare)	0.65	0.70	0.76	1.00	0.90	0.88	0.89	0.84	0.88
Area per farming household (hectares)	0.75	0.90	0.88	0.99	0.94	0.89	0.86	0.86	0.86

Source: WFP/FAO Crop Assessment Missions 2012-2020

Table A2. Proximate causes of change in cereal production since 2016

	2016-17	2018-19
% change in net cereal production	-16.2%	7.1%
% change yield	-1.5%	0.0%
% change area per HH	-8.3%	0.3%
% change farming households	-7.3%	7.4%

Source: authors' calculation

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