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# Covid-19 Bulletin

## Maize Flour Price trends in rural districts and urban districts of Lesotho under COVID-19

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*This bulletin focuses on the relationship between maize flour price trends and the actions in response to COVID-19 Pandemic in Lesotho. An understanding of food price movement is important for providing guidance on policy interventions that would ensure food security among households and the country at large.*

We begin by presenting the general trends in maize flour price movements, before examining their rates of change compared to the past year. We then present trends for actual observed prices and prices predicted from models that control for seasonality in order to understand whether prices in the Covid-19 period differed from those that would have prevailed in the absence of restrictions due to Covid-19. Finally, the bulletin concludes with recommendations for consideration.

Maize is Lesotho's major food staple and it constitutes between 50% - 60% of an average household diet (kilojoules) in Lesotho (National Early Warning Unit, 1994). Despite this, Lesotho has over the past three decades been a deficient producer

of maize (production is inadequate to meet the country's requirement necessitating importation of supplementary maize grain from other countries like South Africa) (Bureau of Statistics, 2019). Maize is produced by all farming households principally for home consumption (scanty amount for sale) in the four ecological zones (mountain areas, foothills, lowlands and Senqu river valley). Smallholder farmers are the dominant maize producers, with a few commercial farmers who sell maize grain to the two major milling companies (Lesotho Milling Co (pty) Ltd, Maputsoe and Lesotho Flour Mill) and breweries in the country (Morojele and Sekoli, 2016).

Lesotho has ten districts namely; Berea, Butha-Butha, Leribe, Mafeteng, Maseru, Mohale's Hoek,

## LOCAL STAPLE FOOD MARKET DYNAMICS UNDER COVID

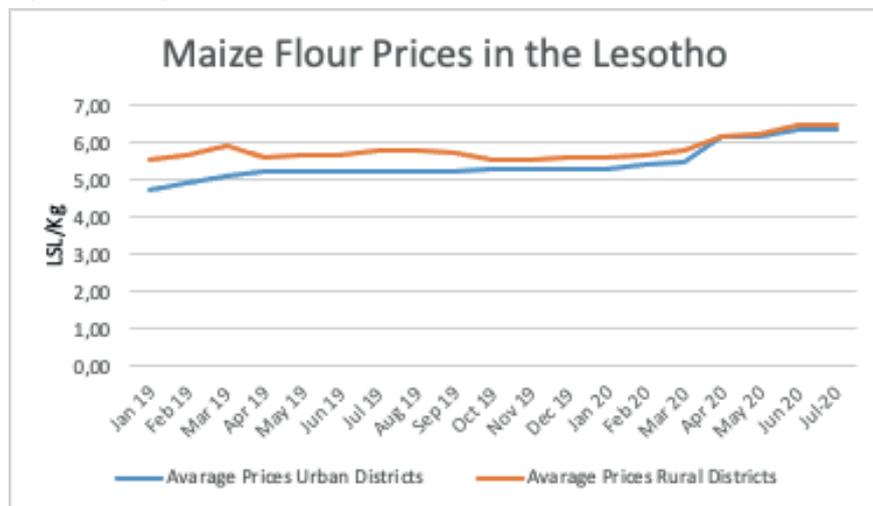
The pandemic is likely to be more disruptive to local food markets and thus have more serious effects on the poorest and most vulnerable groups and communities than any of the crises in recent years. This is because the poor and vulnerable are affected by changes in local food staple prices significantly more than other population groups, not only because of more limited purchasing power but also because of differences in consumption baskets. Moreover, domestic markets for local food staples such as yam, cassava, white maize, cowpeas, millet or sorghum tend to behave differently during times of crisis than global markets for major commodities such as rice, wheat or yellow maize. For instance, the last global food price crisis had much more significant impacts on the latter group of food commodities. Local food staples markets tend to be rather segmented from global food markets. Staple food prices therefore tend to be isolated from global market shocks. The difference with Covid is that the disruption of food supply chains has hit both domestic and global food markets rather badly.

The global nature and complex ramifications of the pandemic make it impossible to avoid the pain from rising food prices, in particular among vulnerable groups. Different staples weigh differently in local diets. Different communities are affected differently by changes in prices of different staples. Some markets are more connected than others and therefore price changes for the same staple food vary across geography and over time. Consequently, a good understanding of how local staples markets behave and close tracking of changes in food prices at community level have to be key elements of any strategy to protect livelihoods. AKADEMIYA2063 scientists and their partners are working to ensure that governments and other national stakeholders have sufficient information to plan and respond to the effects of the pandemic on local markets.

Ousmane Badiane, Executive Chairperson

Mokhotlong, Qacha's Nek, Quthing and Thaba-Tseka. This bulletin examines the maize flour price trends in accordance with the rural-urban districts dichotomy. Berea and Maseru are located in the lowland ecological zone and they are classified as urban districts whilst Mokhotlong and Thaba-Tseka

Figure 1. Average Maize Flour Prices in the Lesotho

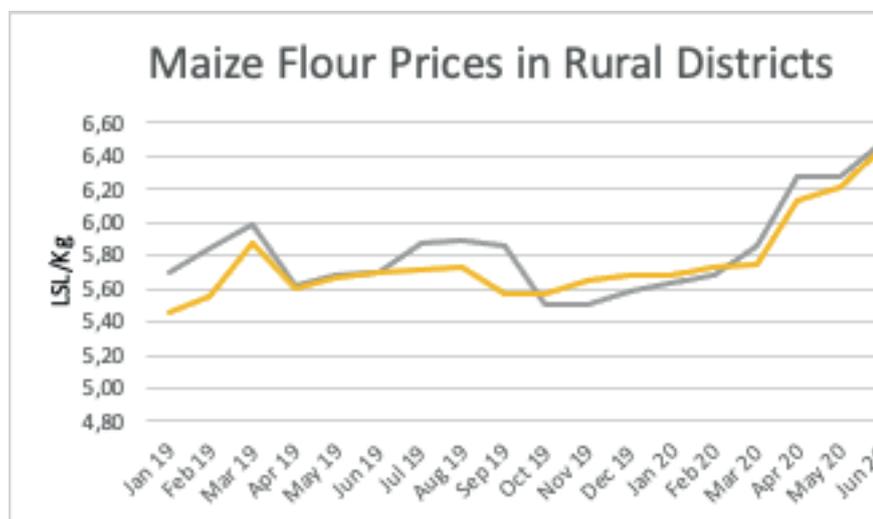


Source: Author Computation from Lesotho Bureau of Statistics 2020

lie in the highlands (mountain) ecological zone and are described as rural districts. Our expectation is that since most maize is imported into the urban centres from outside, prices in urban centres should be lower than in rural centres owing to transaction costs of distribution beyond the urban centres.

As depicted in Figure 1, the maize flour prices in the markets located in rural areas (Mokhotlong and Thaba-Tseka districts) are generally higher (averaging LSL5.83/Kg) compared to the prices in the urban areas (Berea and Maseru districts) averaged LSL5.45/Kg throughout 2019 and 2020. However, it is imperative to note that there was a notable spike in the prices in both rural and urban districts in March 2020 and thereafter the prices continually grew until the last recorded value in July, 2020. The spike in prices coincided with the country's government declaration of a State of Emergency over the COVID-19 Pandemic and imposing of lock down restrictions towards the end of March. The spike and the continuous growth of the maize flour prices may depict the impact of COVID-19 market restrictions which may have resulted in increased scarcity of the maize flour in both rural and urban districts due. The instructions from the government to close schools, imposing social distancing and others as measures to limit the spread of the virus may have

Figure 2. Average Maize Flour Prices in Rural Districts



Source: Author Computation from Lesotho Bureau of Statistics 2020

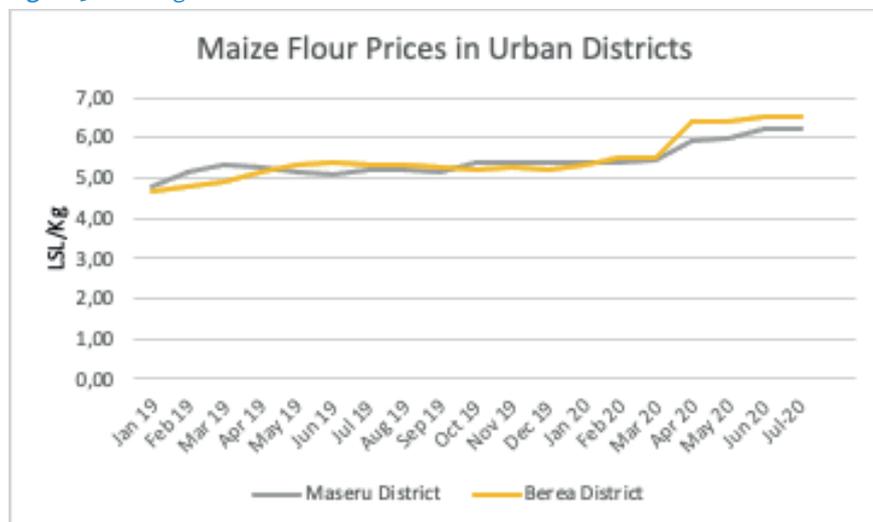
led to limited supply of maize flour (and panic buying of the maize flour since it is an important food commodity).The general tendency of maize prices to be higher in rural markets is a result of the fact that most of the maize flour is imported and distribution to rural areas entails an added cost.

Figure 2: As stated earlier, both the Mokhotlong and Thaba-Tseka districts are located in the mountain areas where all the farming households produce maize for home consumption, albeit in insufficient quantities. Highlands have limited arable land hence low maize production when compared to the lowlands. Furthermore, the climatic conditions in the mountainous zone limit the planting period to only commence in September and terminate in November due to early chilling injuries that the crop may suffer. This therefore requires families to supplement their home-milled maize flour with purchased maize flour (the locally produced maize flour branded Chai Maize Meal).

Figure 2, shows that the prices of maize flour are stable after the harvest season in March 2019 (with notable relative fluctuations in Mokhotlong district). However, the maize flour prices rose sharply in March – April 2020 from LSL5.86/Kg and LSL5.75/Kg to LSL6.27/Kg and LSL6.13/Kg in Mokhotlong and Thaba-Tseka respectively. The rise in prices continued and the peak was recorded in July 2020 (LSL6.51/Kg for both Mokhotlong and Thaba-Tseka). The sharp rise in March – April 2020 and the continuous rise in maize flour may be attributed to the COVID-19 Pandemic because the declaration of the State of Emergency by the Government of South Africa in March 2020 imposed the closure of borders (Lesotho is a landlocked country surrounded by South Africa, from where 95% of her imports come and where 40% of her exports go to (Bureau of Statistics, 2018/2019)). The restriction in movement between Lesotho

and South Africa may have affected the movement of maize between the countries to supplement Lesotho's requirement hence leading to a scarcity which contributed to the spike and continuous growth of the maize flour prices. With both Mokhotlong and Thaba-Tseka being further away from the urban districts and not easily accessible, the shortage of the maize flour was much more felt hence the notable and significant price increases.

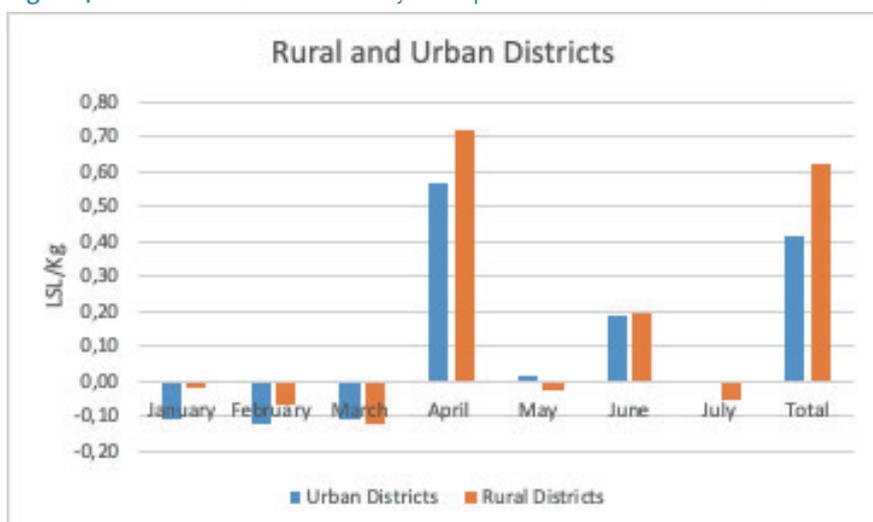
Figure 3. : Average Maize Flour Prices in Urban Districts



Source: Author Computation from Lesotho Bureau of Statistics 2020

Berea and Maseru are both urban districts and they lie in the lowlands of Lesotho. The majority of the country's population (about 80%) live in the lowlands and foothills. The lowlands and foothills constitute 30% of the country's land area (National Early Warning Unit, 1994). The highest production of maize is recorded in the lowlands because this zone has more arable land and conducive climatic conditions. This allows for maize to be planted over a longer period (from October to mid-November) (van Schalkwyk et al., 1997). As seen in Figure 3, the prices of maize flour stable through 2019 (averaging LSL5.25/kg and LSL5.21/kg in both Maseru and Berea respectively between January 2019 and March 2020). However, the notable spike in April 2020 (LSL5.91/kg in Maseru district and LSL6.41/kg in Berea district). From April to July 2020, the average prices of maize flour were LSL6.09/kg in Maseru district and LSL6.47/kg in Berea district. The discrepancy in the maize flour prices between the two periods (January 2019 – March 2020 and April 2020 – July 2020) may depict the impact of the COVID-19 Pandemic restrictions (the declaration of State of Emergencies in both Lesotho and South Africa).

Figure 4. Difference-in-Difference Analysis Graph of both Rural and Urban Districts



Source: Author Computation from Lesotho Bureau of Statistics 2020

Despite State of Emergency in Lesotho not imposing any travel restrictions the South African instigated a full-lockdown implying full restrictions on travels. This may have had adverse bearings on the movement of maize between the two countries. However, the spike in prices was not as high because it was cushioned by the high maize production in the lowlands and the proximity to country's port for maize imports (Maseru city, the capital of Lesotho). The travel restrictions limited the supply of maize flour heightening the demand hence the spike in prices.

It is imperative to examine the data further to rule out the effects of seasons in the price changes observed and for this purpose, we compared the month-on-month changes in 2020 with those observed in 2019 to see the general direction of price change in 2020 and whether it was similar to 2019 (Figure 4).

Figure 4 above compares changes in maize flour prices in the first seven months of 2020 to those of the same months in 2019 in order to confirm whether the observed changes in 2020 were unique from the general patterns. It is seen that, during the COVID-19 pandemic period, the prices spiked tremendously in April and June in both the urban and rural districts. This actually implies that the maize flour prices in April and June were significantly higher in 2020 than the prices in the corresponding months in 2019. The State of Emergencies in both South Africa and Lesotho in March affected the movement of maize grain between the two countries. The prices fell in May because it was the harvesting season and in July because of the ease of the Lockdown in South Africa and in Lesotho as well and this allowed the movement of commodities between these countries. Prices generally increased in 2020 than normally expected in the that period of the year.

To consolidate the evidence linking responses to Covid-19 to maize flour price changes, in the urban and rural areas of Lesotho, we predicted the prices of maize flour for both the urban and rural markets using data spanning November 2012 to December 2019 (implying a total of 86 observations). Thereafter, we used the parameters of the model to forecast prices for the period of January to July 2020 in order to see the differences. The results summarizing the predicted and observed prices from each of the areas are presented in Figure 5 and Figure 6.

**Figure 5.** Observed and predicted maize price trends in rural markets in the pre and within Covid-19 period

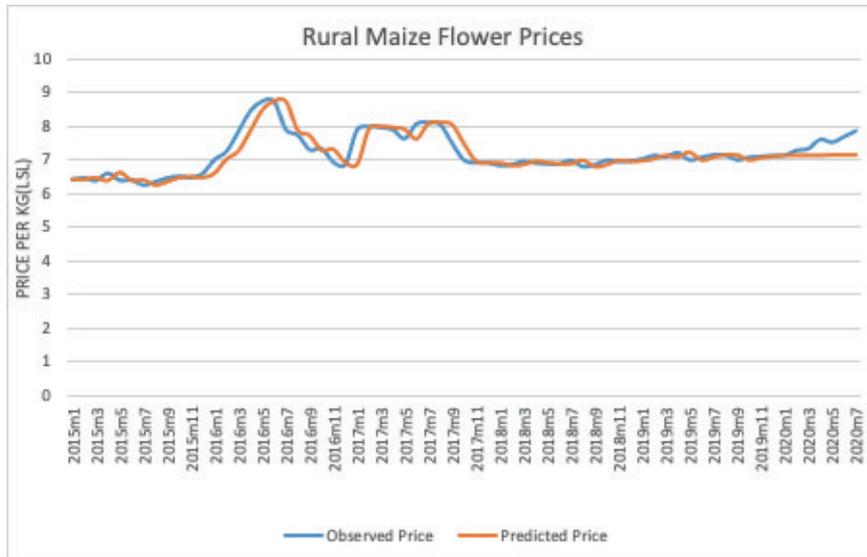


Figure 5 shows that the prices predicted by the model for the period preceding the Covid-19 period are very similar to the observed prices over the same period and yet the predicted prices and the observed prices for the Covid-19 period (2020 period) are visibly different from actual prices. The Actual prices were higher than those predicted by the model even when seasonality is accounted for. The departure of observed prices from the predicted prices was visible from March 2020 and the gap widened towards July 2020. This difference implies that in Lesotho, maize flour prices increased more than would be expected in the same period, which means consumers suffered within that Covid-19 period. Thus, because Lesotho depends so much on imports from South Africa, the restrictions in movement within Lesotho and South Africa may have reduced supply of food commodities in Lesotho leading to price increases. Although maize harvesting commences from around May/June, this did not help reduce the price increase, perhaps because international trade accounts for a large share of Lesotho's maize flour supplies.

**Figure 6.** Observed and predicted maize price trends in urban markets in the pre and within Covid-19 period



Maize flour price behaviour in the urban area markets also mimicked the rural trend (Figure 6). Prices of maize flour increased relative to predicted prices after March 2020 in urban areas which underscores the importance of market disruptions for market arbitrage and price determination.

As previously noted, the prices for urban areas in Lesotho are generally lower than for rural areas because, Lesotho, a mountainous country relies more on South Africa for supplies of food commodities. Since rural areas have to receive supplies from the urban centres once imports get into the country, transaction costs imply that rural areas are expected to experience higher prices. There is a role for food policy to facilitate rural and urban market integration in order to reduce transaction costs and ensure that commodities reach the rural poor at affordable prices.

### Key Observations and Policy Recommendations

The above analysis illustrates that, there is a correlation between the maize flour prices trends in Lesotho to the impacts of the COVID-19 Pandemic (during the first seven months of 2020) even though this correlation is heterogeneous across space. It would appear that the declaration of the State of Emergencies in both Lesotho and South Africa imposed restrictions in movement between the two countries thus, to a certain extent constrained the importation of maize and other essential food commodities. This limited the amount of the maize flour in the market hence causing an upsurge of the maize flour prices. In order to mitigate against such in the future (should there be another world wide catastrophe), interventions and restraints should be implemented such that they do not impact market operations and the movement of essential commodities between trading countries and within the country.

The Government of Lesotho in liaison with the Government of South Africa through the Southern African Customs (SACU) and the Southern African Development Community (SADC) need to fittingly enact policies that would embolden trade even in adverse conditions like this pandemic. This may include policies which would expedite and enforce the use of Personal Protective Equipment (PPE) in borders and markets, regulating the transportation and selling of essential products such as maize grain and maize flour to avoid unnecessary closures. This underscores the importance of regional approaches to crisis handling for effectiveness and regional prosperity.

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