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Grains for gains: lowering Mozambique's external dependence on rice

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Main message

The rice sector is still performing poorly in Mozambique. Currently, there are not many policies aimed at improving the rice value chain performance. As a result, the outcomes from the rice value chain have consistently shown a mixture of incentives for retailers and disincentives for farmers. To overcome these, we recommend the following actions:

- Promoting the use of improved production technologies;
- Creating mechanisms to increase the bargaining power of farmers through promoting farmers organizations for instance;
- In the short-run, establishing price control mechanisms (floor prices) to ensure some additional protection to domestic farmers and millers, while pursuing efficiency-enhancing investments. In the long-run the improvements in efficiency would reduce the need for trade protection.

Introduction

In Mozambique, rice plays an important role in terms of food security. Despite being the third most consumed food, after maize and cassava, it is ranked fourth among the top staple crops produced in the country (FAO, 2014). According to the National Bureau of Statistics (INE, 2010), subsistence farmers account for nearly 90 percent of the total domestic rice production. Nonetheless, the country is still far away from self-sufficiency on rice.

As shown in figure 1, rice yields and

production are still very low in Mozambique. For instance, over the period 2007 to 2017 the average rice yield domestically (0.98 ton/ha) were below the observed in the Sub-Saharan Africa (2.07 ton/ha) and Southeast Asia (3.85 ton/ha) regions (USDA, 2018). However consumption has been increasing significantly, leading to a large increase in imports which now account for the majority of consumed rice. According to Calima et. al (2014), imports account for nearly two-thirds of the domestic rice demand. This makes rice the main imported agricultural commodity

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in Mozambique, representing around 18 percent of the total value of agricultural imports (Zacarias & Esterhuizen, 2015). Between 2005 and 2013, rice imports have accounted on average to near 173 million dollars (FAOSTAT, 2017).

Between 2007/08 and 2010/11, domestic rice production has improved significantly (figure 1). This, in part, results from the Government efforts to revitalize the sector through programs aimed at distributing improved seeds and equipment to farmers (Kajisa, 2014; FAO, 2014). Nonetheless, in the following years production levels have decreased significantly, likely due to weather conditions and the political conflicts observed mainly in the central and Northern provinces. From 2011/12 to 2016/17 the southern and central provinces (including important districts for rice production such as Chók-wè) have experienced consistently adverse weather conditions such as floods and the droughts caused by the El Niño (FEWNEST, 2013a, 2013b, 2014a, 2014b, 2015, 2016, 2017).

Besides the Government efforts, the rice value chain is not yet very well developed and market-oriented as only 13 percent of the small-scale farmers actually sell their rice (FAO, 2014).

In addition, results from the MAFAP price incentive analysis suggest that rice farmers face price disincentives and hence receive prices which are below what they would receive if the value chain performance were more efficient, with farmers' bargain power increased and reduced transaction costs from farm gate. Conversely, retailers capture mostly price incentives. This is shown by the nominal rate of protection (NRP) at both the producer (farm gate) and retailer (point of competition) levels, as displayed in figure 2. A negative NRP suggests that price in the domestic market is lower than its equivalent reference price taking into account the international market price and the local domestic value chain performance, which is often connected to the inefficiencies described as excessive marketing and distribution costs. Factors such as poor pricing transmission to farmers and somehow imperfect competition between rice importers (retailers) are likely the main drivers for the overall opposite price incentives to farmers and retailers (FAO, 2017).

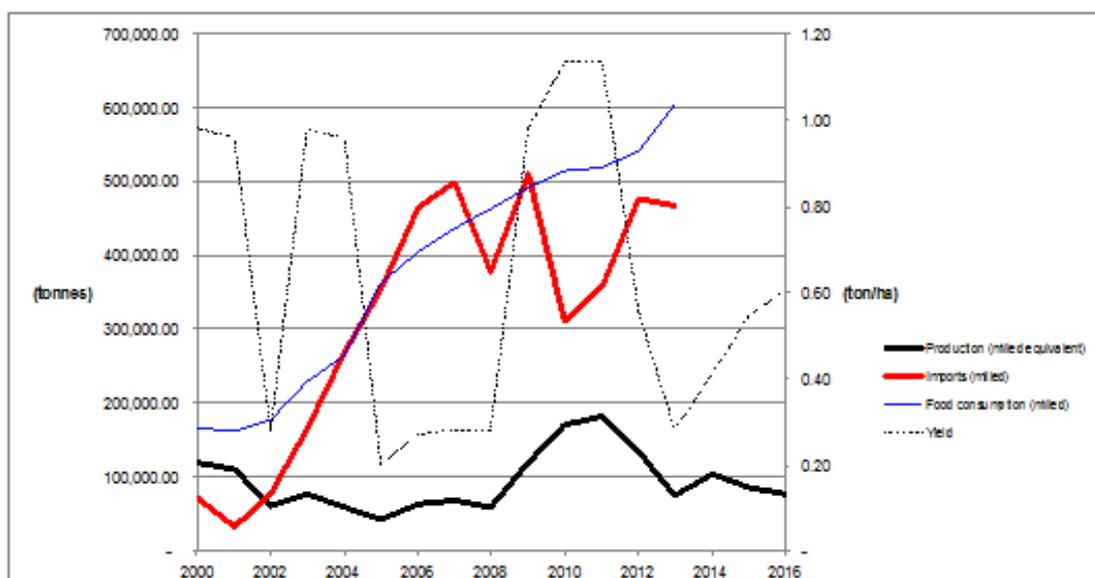


Figure 1: Rice supply, consumption and yield
Source: Data from FAOSTAT (2017)

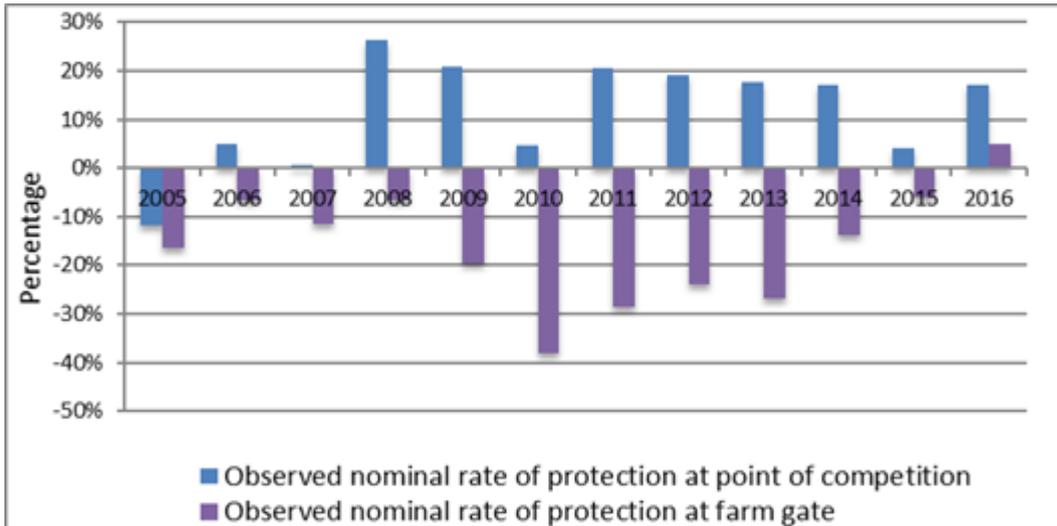


Figure 2: Nominal rate of Protection for the rice value chain
Source: FAO (2017)

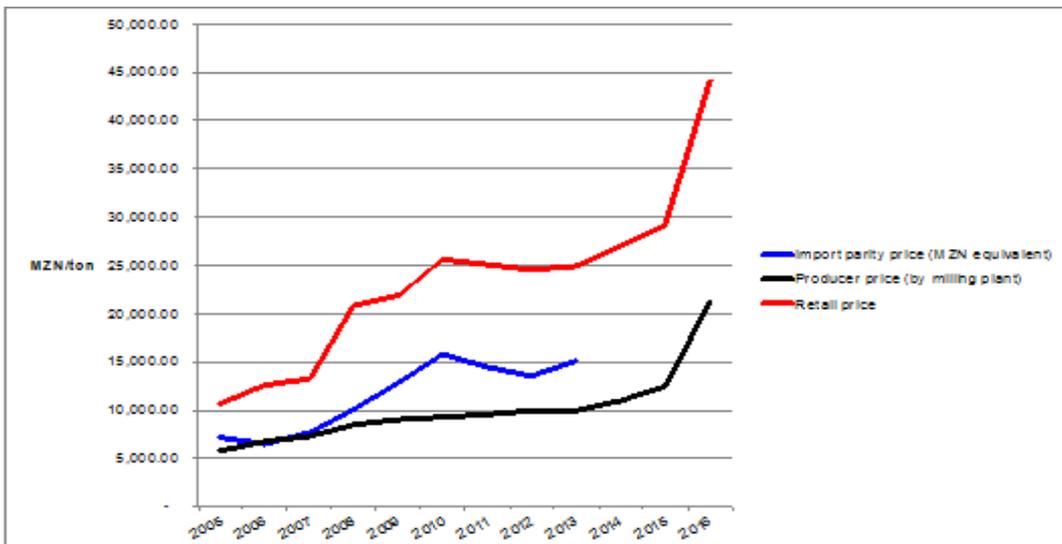


Figure 3: Rice prices in Mozambique
Source: Data from FAO (2017) and FAOSTAT (2017)

Key Issues

Limited production technologies

There is no doubt that Mozambique has experienced some considerable improvements on rice production, particularly between 2007/08 and 2011 (figure 1). However, since then production has sharply decreased. In addition to that, average rice yields over the last 10 years have also been very low (< 0.62 ton/ha) compared to the average yields for other countries in the region. Amongst the main countries that share borders with

Mozambique for instance, average rice yields (ton/ha) over the same period are 2.62 (South Africa), 2.28 (Zimbabwe), 1.50 (Zambia), 1.86 (Malawi) and 2.24 (Tanzania) ton/ha (FAOSTAT, 2017). In countries like China and India, rice yields have been even higher, reaching in average around 6.69 and 3.49 ton/ha, respectively.

The recent trends in the Mozambique rice sector suggest that the country has not been able to sustain consistent production and productivity levels. Though

certain factors related to agro-ecological potential and the climate may be key to explaining the inconsistent production and productivity levels over the years, it is also true that most rice farmers still rely mostly on traditional technologies (use of local varieties and lack of irrigation systems, for instance) that limit their ability to improve their production and productivity levels. The low production and productivity levels translate into a lower supply, which prevents millers from processing rice at their full potential. According to Calima et al. (2014), citing Agrifood Consulting (2005), rice milling in Mozambique is currently operating below half of its full capacity.

Market information asymmetries

Asymmetric information between farmers and retailers is also an important issue on the rice value chain. As for other agricultural commodity value chains in Mozambique, rice farmers do not experience a fair and efficient price transmission as evidenced from figure 3. This is particularly true when macro-economic factors (such as exchange rate fluctuation and increased demand) would have led to increases in domestic farm-gate prices. As a result, only a small fraction of rice farmers (<13 percent) participates in the sales market for their produce without relying on other intermediaries (FAO, 2014). Retailers, on the other hand, have been able to capture the benefits arising from changes in the external environment when these lead to higher prices.

As for the agricultural sector in general, several factors concur to the asymmetric information between farmers and traders. Lack of price information from farmers, poor marketing infrastructure and low bargaining power of farmers are likely the most eminent. However, in addition to that, the lack of clear government policies to regulate the sector seem to be also the main driving factor for the inconsistent incentives affecting rice producers. In an ideal economy, a low degree of government intervention is desired. However, in the case of the rice sector in Mozambique this

assumption does not seem to hold. Thus, if the status quo persists, it is likely that few farmers will continue to grow and market rice, perpetuating the country's huge dependence on imports.

Recommendations

The rice sector development is still struggling in Mozambique. Though domestic prices at the farm gate are lower than import parity prices, currently farmers are not yet receiving enough incentives to increase their production and trade levels. Some urgent interventions are required in order to improve the country's performance on this sector, towards its self-sufficiency on rice production.

One possible approach would be promoting the use of improved technologies such as improved seed varieties and agrochemicals (fertilizers and pesticides) as well as improve the access of farmers to irrigation systems. However, such interventions should also be combined with other actions that improve farmers bargaining power and value chain integration. For instance, this could consist of either improving farmers' access to price information whilst promoting farmers' organization (associations) to improve their bargaining power.

Finally, the Government could also review the current policies in order to ensure some additional protection to farmers and millers, at least until the local industry is stable. This could be achieved, for instance, by establishing of floor (and ceiling) prices for imported rice in the short-run, in order to incentivize domestic trade and milling. In the long-run, we would expect the productivity improvements in rice production and marketing would reduce the need for trade protection. However, the pros and cons of each approach should be assessed carefully.

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