3. The 2004 crisis

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3.1. Description of the crisis

The situation in the rice markets in 2004 turned it into a major concern for consumers and policy makers. The average price of rice increased by 100% for the country as a whole at the end of 2004 compared to the end of 2003 (Minten and Ralison, 2005). This large price rise was found consistently in all provinces (Graph 12). Compared to the lean period of 2003, the harvest prices (April-June) changed very little. This is abnormal as rice prices normally decline significantly after harvest (Moser et al., 2004).[16] The price rise after harvest on the other hand was significantly higher and faster than in a normal year. Graph 13 shows to what extent the year 2004 was exceptional over the last five years. We take the region of Lac Aloatra, the rice basket of Madagascar, as an example. Paddy prices in that area, as in the rest of Madagascar, are characterized by significant but fairly regular seasonal patterns, with high prices in the lean period and low prices in the harvest period. The average price rise between the lean period and harvest period price before the year 2004 was about 52%. In 2004, this increase was 150%.

As major price increases for rice - as well as other major staples - happened after the main marketing season, most small farmers benefited little or not at all from these price increases. Graph 12 indicates that the price levels for agricultural products in most areas only started their increase from July-September 2004 on. The price levels during the period April-June 2004, i.e. the main marketing season in Madagascar (Minten and Zeller, 2000), were only slightly higher than one year earlier. The increase in prices at the end of the year led thus to significant hardship for consumers. Graph 14 shows the percentage of communes that reported to be in the lean period in the year 2004 compared to a relatively normal year 2001 (Minten and Ralison, 2005). The lean period in 2004 started considerably earlier than normal. While in a normal year, 50% of the communal focus groups state to be in the lean period in the month of November, this year this percentage was almost as high as 70%.

The same price changes were noticed in urban consumer markets. For example, the price evolution in the city of Antananarivo is shown on Graph 15. Following its usual pattern, local rice prices increased in the beginning of the year, reached a peak (at about 3000 Fmg/kg) in April and then declined or stabilized for two months. However, rice prices started then a rapid increase from the month of June onwards. In the beginning of 2005, prices were close to 6000 Fmg per kg. While the graph shows that imported rice was cheaper at the end of the year, it was however only available in rationed quantities.

[16] Given the importance of rice in the diet and agricultural production systems in Madagascar, it seems that it is the price setter for agricultural produce (Ravelosoa *et al.*, 1999). Prices of other agricultural products followed the trend that was noticed for rice and paddy. The price of maize increased by 58% compared to the same period of the year before while the price of cassava increased by 69%.

3.2. Events that triggered the crisis

Faced with high prices that were partly beyond their control, the government intervened in rice markets in the second half of the year. To better understand the reasons why, we make a chronology of the important events that happened in the beginning of 2004 that triggered the crisis and that put pressure on the government to intervene.

Two cyclones in the beginning of the year 2004, Elita at the end of the month of January, and Gafilo in the beginning of the month of March, caused significant losses to a rice harvest that was expected to be good. It was estimated that there was damage - because of floods and heavy winds - on almost 500,000 ha of the 1,4 million hectares that were planted in the country overall. The loss in paddy was evaluated[17] at 362,000 tons of paddy or 250,000 tons of white rice, more than 10% of the rice production in a normal year. The commune survey of 2004 seem to confirm this bad year as 40% of the communes estimated to have had lower yields than in a normal year.[18]

During the months of April-May, the situation seemed to normalize itself as the first harvests came in and put some downward pressure on rice prices. However, rice prices did not decrease as in normal years. Nervousness started increasing in June linked with the rapid depreciation of the Malagasy currency. The exchange rate changed from about 7,500 Fmg/US in March to 11,500 Fmg/US in June, a rise of 53% (Graph 14).[19] There were also less rice imports in the first six months of the year seemingly caused by this rapid change in the exchange rate but also because of the increase of international prices in rice. Thai (5% broken) rice prices increased from 212$/ton in January 2004 to 245$/ton in April 2004, an increase of 15% (Graph 16). Vietnamese rice (25% broken) increased by 21% during that same period.

As local rice was quickly sold off after the harvest in the province of Antananarivo, suppliers started looking elsewhere and started earlier than normal bringing in rice from the Lac Alaotra area. While paddy prices were there about 1000 Fmg per kg in the beginning of June, prices increased by 100 Fmg per week and were already at 1400 Fmg/kg at the end of June, i.e. a 40% increase in one month. In August, paddy prices in the Lac Aloatra reached 2700 Fmg/kg and rice prices increased to 4100 Fmg/kg in Antananarivo. These changes led to large concerns on the effect on consumption. There was however no clear statement by the government on how it would deal with the situation. Opposite positions were taken by different ministries. Some argued that the government had to let the markets deal with it while others proposed a straight fixation of the price.

The private sector was also not passive under these events. As to reduce the price levels of imported rice, the private sector wanted to meet the Minister of Finance to propose that the government would take care of some of the costs (port charges, transport costs,

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[17] Joint evaluation mission of the PAM and the FAO.

[18] To mitigate the effects of these cyclones, the government started a rice distribution program where 4,000 tons of rice were distributed at a “prix bonifié” of 2400 Fmg per kg.

[19] This depreciation seems to have been partly due to a decline in the reserves of the Central Bank and the effects of a policy of lowering taxes on a large array of investment and consumption goods.

import duties) which would allow them to sell imported rice at a price that would be lower than 4500 Fmg. However, it never received any response to this request. Importers were hesitant to import given unclear signals of the government and rapidly changing import conditions (exchange rates and international prices of rice). Under these circumstances, local banks were also unwilling to provide credit and they actually discouraged importers to bring in imported rice.

It thus seems that several factors combined to produce a large shock to the rice market between January and August 2004. The two most important ones were the rise in international rice prices and the exchange rate devaluation. The relative importance of these two in the setting of import parity price levels is shown in Graph 17. The exchange rate devaluation was the largest contributor to the nominal price increase in the markets of Antananarivo, especially in the beginning of the year. When the exchange rate appreciated slightly at the end of the year, the international rice prices started its increase, keeping the rice import parity levels about constant since June 2004. Actual prices increases on the market in Antananarivo started later due to lagged effects.

Other factors might have contributed, but to a lesser extent than the two previous factors to the high price rise. The cyclones contributed to less availability of local rice, and especially so in rural areas, but this should have been equilibrated by international imports under a well-functioning market system. Other factors that played a role were the increase in international transport costs due to the increase in gasoil prices and the increase in demand for transport from China. It is estimated that transportation costs from Bangkok and Toamasina increased from 30 US$/ton to 45 US$/ton between 2003 and 2004. The optimistic official production statistics also seem to have been too high and might therefore have underestimated the need for rice imports. Finally, the higher tax rate that was decided in the beginning of 2004 (20% instead of 15%) increased the import parity price with another 5% compared to previous years. All these factors combined led to a significant increase of the real price of rice in 2004 (Graph 5).

3.3. Intervention by the government

The major objectives of government rice policy during the crisis period in mid-2004 were to avoid a rice shortage and to reduce and stabilize the domestic price of rice for consumers. Two major factors seem to have influenced the policy of the government. First, the slow pace of private commercial imports in mid-2004 suggested that the private sector would not supply Madagascar with sufficient imported rice. Second, the policy option of lowering the tariff on imported rice was not adopted. While there was pressure of some donors to reduce tax duties as a way to help in the reduction of price levels, the government resisted this call, partly due to concerns to reach the HIPC targets for fiscal revenues. However, reducing the import duties would have reduced the cost of rice imports and would have led to an increase in private sector imports and lower prices of imported as well as local rice.

Faced with this crisis, the full cabinet met in the middle of August and decided to explore the options of food aid and of importing rice commercially at advantageous

conditions. A mission of the Ministry of Commerce (including the Minister) traveled to Asia and signed a commercial deal with Thailand to import 100,000 tons of rice at a price of 272$ CAF. At the end of the month, the government announced officially that it would import 100,000 tons of rice from Thailand.[20] The government rice entered the Malagasy market between October 2004 and March 2005. However, the first loads of the government negotiated rice only started arriving in October (the first load of 13,000 tons arrived on 20/10/2004 in Toamasina). This late arrival was explained by the difficulty of finding means of sea transport and the increase in the costs of sea transport. Given that the contract was negotiated on a CAF basis, the Thai suppliers had little incentive to look for a speedy - but were rather looking for a cheap - solution.

The 100,000 tons of government rice that were initially agreed upon increased in reality to almost 200,000 tons in total in the beginning of 2005 (Table 14). Five companies took part in the import of the government rice: Magro, Rabenaivo, Silac, Mifidy and SCAA. The biggest beneficiary was the company Magro, a company with close connections to the government and a newcomer in rice imports, which imported about 70% of total government negotiated rice. These companies signed a "contrat de mandat" where the government accepted to delay the payment of import duties and to use rice donations to compensate for their losses. There was however no transparency on the exact import conditions and the level of duties that these companies had to pay and this situation remains unclear.[21]

The importers that participated in the contract were asked to sell the government negotiated rice to wholesalers at 3,300 Fmg per kg and to retailers at 3,400 Fmg/kg. This rice was then being distributed by retailers at the price of 3,500 Fmg per kilo, i.e. significantly below market prices of imported as well as local rice.[22,23] This low price led to huge demands for government rice. The government therefore resorted to a rationing scheme: a limited quantity was sold per person (3 to 5 kg) and significant opportunity costs were required for queuing. The distribution of the government rice was also largely focused on the big urban centers. This rice was, at least initially, rare in the smaller urban centers and non-existent in rural areas. There were also complaints about the quality of the imported rice.

As the government did not import enough rice to be sold at 3500 Fmg and as the commercial importers reduced imports due to the lack of transparency and uncertainty with respect to the government interventions, there was less rice on the market than in a normal year and this showed up in the local prices which increased above import parity levels. In some cases, prices increased extremely high: for example, rice was sold at 8,000 Fmg in

[20] 5000 tons would be received as a gift.

[21] The government also asked for solidarity and aid towards reducing the effect of rice crisis at the national as well as the international level. However, this had little effect. Gifts from foreign countries were limited: 5000 tons by China and 5000 tons by Thailand. National solidarity was limited to help by the army, some members of the National Assembly who helped in local distribution, and some private enterprises that organized local transport in the areas where they are active.

[22] However, the government often still helped in the distribution of this rice. In the region Analamanga, distribution was done by the army. Five trucks were used to help the regional authorities to distribute the rice at the communal level. Local mayors financed the costs of the transport personnel.

[23] Given the costs involved to get the rice in some more remote communes, rice was sold higher than the recommended 3500 Fmg/kg

Farafangana and at 11,000 Fmg in Vangandraino (in the Southeast of the country) in November. In Antalaha, prices went even up to 17,500 Fmg.

In an effort to control price hikes in their regions, some local authorities (often the 'sous-prefet') prohibited or limited the export of rice from their fivondronana through the use of 'barrières économiques' (Minten and Ralison, 2005). For example, traders that exported rice from the Lac Aloatra area needed a special authorization to export rice to Antananarivo. Mostly only larger traders and traders that were original from the area itself were given this type of permission. In some areas in the province of Antsiranana and Mahajanga, rice trade was limited to 5 bags per truck. This was for example the case in the Sofia (the fivondronana of Befandriana Nord, Madritsara, Bealanana) and the Sava region (the fivondronana of Vohemar and Andapa).

These prohibitions in rice trade had the intended effect and led to a relatively lower rice price in these fivondronana where the prohibition of rice exports was the case. On the other hand, it led to higher prices in rice importing regions. For example, while transport costs between Andapa and Sambava were about 400 Fmg per kg, rice prices were in the latter city about 4000 Fmg per kg higher. Prices in Sambava were almost as high as 20,000 Fmg per kg at the end of December. These local regulations might therefore have increased rice price volatility in the country as a whole.

Government interventions in rice markets seem to have exacerbated the effects of these shocks on the domestic rice market. Different factors contributed to uncertainty. First, the possibility of waiving or rebating import tariffs (equal to 45 percent of the c&f value of rice imports) on government-sponsored commercial imports of rice increased uncertainty for private imports through non-government sponsored trade. Second, the government announced a target price that was less than import parity so that imports would not be profitable.[24] Third, when the government announced this policy and an importer wanted to leave the country with his shipment, the government detained the ship and obliged the owner to sell at the prices fixed by the government.

Hence, the government policies discouraged private imports and reduced the total volume of imports and the total rice supply of Madagascar. Ultimately, imports in 2004 were only 151 thousand tons, compared to 254 thousand tons in 2003.[25] The sales of government rice at an official price of 3500 FMG/kg led to a parallel market. The official price was below the import parity price (including tariffs) so that private sector imports were not profitable**.** Since the government did not have sufficient rice to meet all demand at the official price, sales at a price below open market prices resulted in rationing and a parallel market. This rationing is seen by the increases in local prices above the import parity levels at the beginning of 2005 (Graph 18).

[24] For example, the largest rice importer in 2003, who did not take part in the import of government rice, canceled a contract for the import of 48,000 tons from Thailand in 2004 for which it had to pay 130,000 USD of cancellation fees. The importer preferred to do so instead of facing the uncertain Malagasy rice market.

[25] Note that this change in the level of imports is due not only to the changes in world prices and trade policy: other factors including the size of the rice harvest and changes in household income also have a major influence on rice trade flows.

The rice crisis in 2004 and interventions by the government led to clear losers and winners. Most of the rise in agricultural prices in 2004 happened when the majority of smaller farmers had sold their production. They were then faced by significantly higher prices in the lean period when most of the smaller farmers become net buyers of agricultural produce. The winners were the people that stored rice until the later part of the year and production areas where rice is harvested later (the Lac Alaoatra area and the Marovoay plane). At the consumption level, especially the poorest urban households seem to have benefited from the government negotiated rice. While the targeting worked reasonably well in urban areas[26], this was less the case in rural areas: the government negotiated rice did not reach these areas very well; in the case it did reach them, it was often sold at a higher price than 3500 Fmg/kg. There were also reports of incidences of corruption (Dabat, 2005). Given the importance of the net buyers in rural areas, hardship increased significantly in the lean period of the year 2004 in rural areas: in the commune survey of 2004, a high 84% of the focus groups stated that their purchasing power went down in 2004 compared to earlier years.

[26] However, there were large opportunity costs due to queuing. Dabat (2005) evaluates these overall costs at more than 10 million $.