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Monitoring the Impact of COVID-19 in Myanmar

Rice millers – July 2020 survey round

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To understand how Myanmar's rice value chain has been affected by the COVID-19 crisis, a series of phone interviews are being conducted with rice millers from Ayeyarwady, Bago, and Yangon. This report presents results from the first round of interviews that was conducted in July 2020 with 404 medium- and large-scale mill owners and managers.

Key Findings

- Strikingly, 60 percent of mills are anticipating a revenue drop of at least 30 percent this year compared to 2019. Only 3 percent of mills are expecting an increase in revenue.
- Just over half of the mills interviewed experienced disruptions in selling milled rice and in buying paddy. However, those impacts have lessened considerably, as only 15 percent of millers reported experiencing those disruptions in the past 30 days.
- Almost all mills regarded byproduct sales as important to their business. Roughly half reported no changes in byproduct prices compared to 2019, but one-quarter reported price increases, while the other quarter reported decreases. Mills from Ayeyarwady have been more negatively impacted by lower byproduct prices than elsewhere.
- For most mills, both paddy purchase and rice sales prices are now slightly higher than the 2019 average. Interestingly, prices increased more for low-quality varieties than for high-quality varieties. Margins for low-quality varieties have increased relative to 2019, while they have decreased for high-quality varieties. Thus, mills producing larger quantities of high-quality rice now may be adversely affected by lower margins.

Recommended Actions

- Continue and expand the government relief loan program offered to small and medium enterprises – Action 2.1.1 under the COVID-19 Economic Relief Plan (CERP) of the Government of Myanmar. This would assist mills struggling with lower revenues and buffer smaller mills from further shocks during the crisis.
- Government should extend tax relief to mills hard hit by the COVID-19 crisis through waivers or deferrals (CERP Action 2.1.3).
- Government should facilitate exports by putting in place easier licensing processes (CERP Action 2.4.3), such as allowing licenses to be obtained online.

Introduction

This policy note is the first in a series designed to monitor and assess the impacts of the COVID-19 economic crisis on Myanmar's rice mills. Rice mills are vital to Myanmar's most important agricultural value chain. Rice accounts for more than 30 percent of the value of all crops produced in Myanmar (CSO 2018), and consumers eat between 130 and 165 kg of rice per capita per year (Ahmed et al. 2019). Mills are the essential link between paddy fields and rice bowls. Besides milling and processing, they play many key functions in the rice value chain, including buying paddy directly from farmers, offering inputs on credit to farmers, and drying and storing paddy and milled rice. Through these functions, mills add substantial value in rice supply chains, which benefits farmers and consumers (via food quality) both directly and indirectly (Minten et al. 2012; Singh et al. 2017; Reardon 2015). Therefore, any serious disruptions or shocks to rice mills will impact both rural rice producing households and urban consumers.

Myanmar, like most countries, has enacted policies designed to curb the spread of COVID-19, including stay-at-home orders, lockdowns, curfews, and business and restaurant closures. These policies have had negative impacts on the agri-food system (Diao et al. 2020; Goeb et al. 2020). Rice mills have been affected, too. Furthermore, the Myanmar government has enacted policies to ensure a sufficient national supply of rice during the COVID-19 crisis which have direct implications for rice millers. On April 10, the government announced a ban on rice export licenses. This later was replaced by a policy that all exporters were to sell 10 percent of their export sales to the government at a fixed price (Diao et al. 2020; Global New Light of Myanmar 2020; Ministry of Commerce 2020). These policies directly targeting the rice supply early in the COVID-19 crisis underscore rice's importance to Myanmar's food security.

This study's principal objective is to provide data and insights to government and stakeholders on the impacts of COVID-19 shocks and policy responses on rice mills in Myanmar. To learn about the crisis's effects, we conducted phone interviews with 404 medium- and large-scale rice mill owners and managers from Ayeyarwady, Bago, and Yangon regions in early and mid-July 2020 (CSO 2018).[1] Our sample of mills comes from a 2019 study by the International Growth Centre and the Ministry of Commerce that involved in-person interviews with rice millers. Thus, the 2019 pre-crisis baseline data can be used to compare to that collected through our phone surveys. This report provides insights on (i) the overall effects, disruptions, and responses to the COVID-19 crisis for rice millers, and (ii) changes at the mill level in paddy, rice, and byproduct prices this year compared to 2019.

COVID-19 effects on the business operations of rice millers

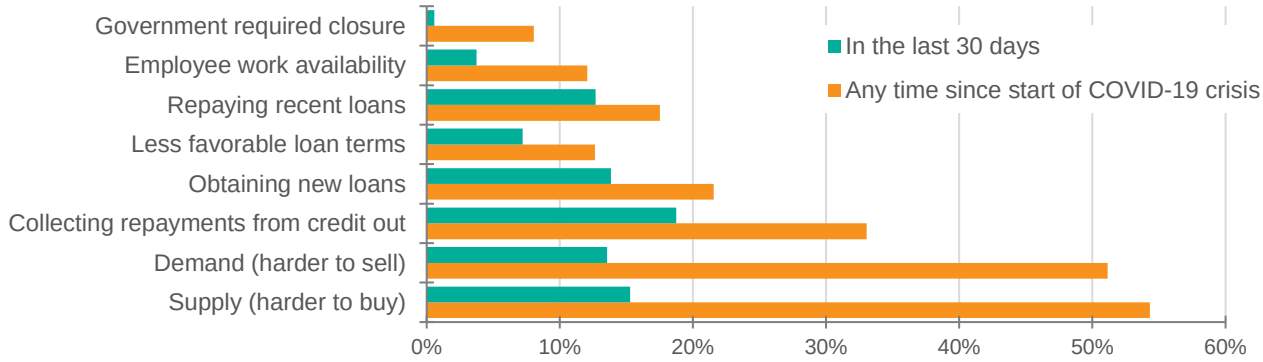
To learn about the effects of the COVID-19 crisis, we asked millers whether they had experienced any disruptions to their business because of the crisis. We asked questions for the same categories of disruptions for two time periods: (i) at any time since the start of crisis, and (ii) in the 30 days prior to the phone interview. To learn about how millers have responded to the disruptions they reported facing, we asked a series of questions about the actions taken by millers since the start of the crisis. In addition to this series of disruption and response questions, we asked more detailed questions on related topics, including labor, paddy buying practices and prices, rice selling practices and prices, rice milling byproducts, rice storage, and transportation.

Figure 1 shows the disruptions experienced by rice millers since the start of the crisis and in the 30 days prior to the phone interview. Over half of the mills have experienced disruptions in selling milled rice and in buying paddy. However, those impacts have lessened considerably recently, as

[1] The sample was split into two groups. The first group of interviews were conducted from 29 June to 6 July 2020 and the second group of interviews were conducted from 16 to 24 July 2020.

only about 15 percent of millers experienced those disruptions in the 30 days prior to interview. These improvements are likely explained by further lifting of COVID-19 related transportation restrictions. Relatedly, there have been large decreases in the share of mills required to close by the government – from 8 down to 1 percent – and in the share of mills experiencing disruptions due to challenges related to employee work availability – from 12 down to 4 percent.

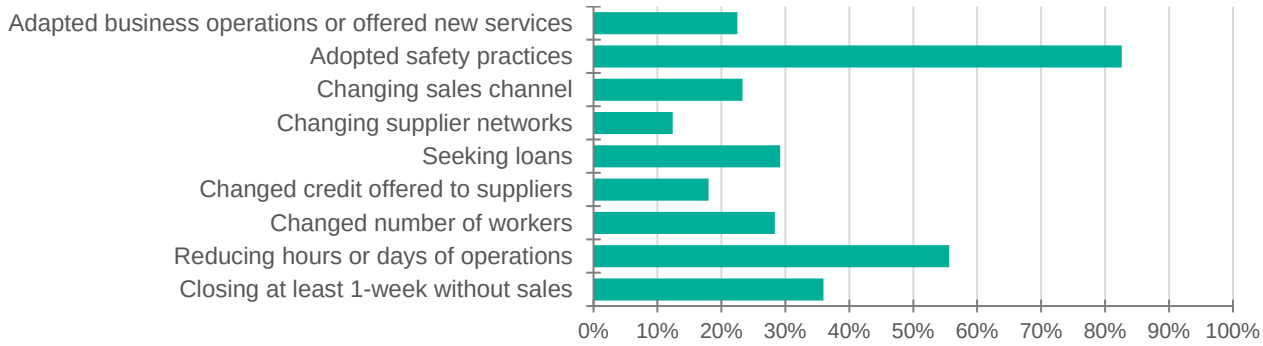
Figure 1. Disruptions to rice milling business from COVID-19 crisis, share of respondents reporting disruption



Source: Rice millers phone survey – July 2020 survey round

Credit-related disruptions have persisted. Collecting repayments from credit provided out is the third most common disruption since the start of the crisis, but has been the most common disruption over the 30 days prior to the July survey round. Disruptions in acquiring new loans, loan terms, and repaying recent loans have affected between 13 and 22 percent of mills overall, but these loan-related disruptions showed small improvements in the 30 days prior to interview. The continued effects of the COVID-19 crisis on millers' ability to acquire and offer credit may be having or could have significant implications for mill profitability, cash flow, and capital investment.

Figure 2. Rice millers' business responses to the COVID-19 crisis, share of respondents reporting response



Source: Rice millers phone survey – July 2020 survey round

Figure 2 displays millers' business responses to the COVID-19 disruptions. At some point, most mills have adopted safety practices to mitigate transmission risks for employees or customers. Four-fifths of mills reported requiring employees to regularly wash their hands and to wear face coverings. Over one-third of mills conducted temperature screenings of employees. The second most common business response – utilized by 56 percent of mills – was to reduce the mill's operating hours, while 36 percent went further and voluntarily closed for at least one week.

Twenty-nine percent of respondents had applied for a loan to enable them to better manage the COVID-19 disruptions – a response related to the credit disruption patterns shown in Figure 1. Two-

thirds of loan applications were to private banks, followed by applications to the Myanmar Agricultural Development Bank (13 percent) and to government (9 percent).

Labor patterns have also been affected by the COVID-19 crisis – 28 percent changed their number of workers in response to COVID-19 related disruptions. Table 1 provides more context on the labor employed by the mills surveyed. Our sample of rice mills employs about 8 permanent employees and almost 20 temporary or casual workers per week on average. While the share of female workers is small, wages are comparable between men and women employees.

Table 1. Mill mean and median number of permanent and temporary employees, share of female employees, and daily wages

	Permanent employees		Temporary employees			
	Number	Female, %	Number	Female, %	Male daily wage, MMK	Female daily wage,, MMK
Mean	7.7	13	19.5	7	6,919	7,000
Median	5		15		6,750	7,000

Source: Rice millers phone survey – July 2020 survey round. In July 2020, USD 1.0 ≈ MMK 1,340.

Despite the COVID-19 crisis affecting employment patterns in the mills, Table 2 shows few employee disruptions in the 30 days prior to the interview. Only 6 percent of mills reported any changes related to labor, with the largest effect being a decrease in employee earnings. However, these results may understate the effects on mill labor related to any employees being laid off before the 30-day recall period used for the survey.

Table 2. COVID-19 labor disruptions in the 30 days prior to interview

Labor disruption	Respondents, %
Any disruptions	6
Temporary layoffs	1
Permanent layoffs	0
Reduction in earnings	3
Stopped work due to health concerns	2
Left to home village	1

Source: Rice millers phone survey – July 2020 survey round

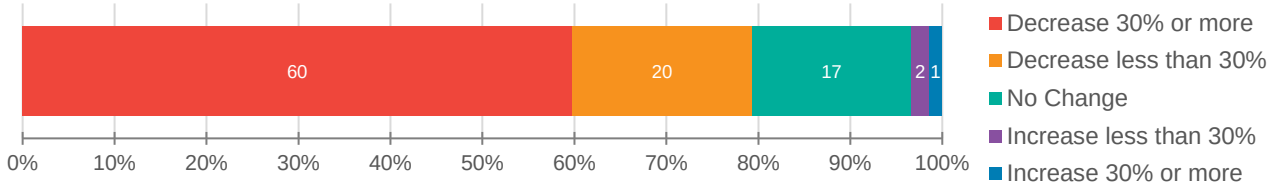
As seen in Figure 2, supplier networks and sales channels have not changed much between 2020 and 2019 for the rice mills surveyed. When purchasing paddy, most millers buy from individual farmers (85 percent of millers do so) and traders (37 percent). When selling rice, many millers sell to brokers (49 percent), wholesalers (46 percent), retailers (27 percent), local direct sellers (15 percent), or to a commodity exchange centers (26 percent). However, millers no longer sell to exporters to the degree they did earlier. In the baseline survey of 2019, 32 percent reported that they sold rice to exporters, but this share decreased to 9 percent in the July 2020 phone survey round. This helps explain the result in Figure 2 that sales channels changed more than supplier networks.

To learn about the recent effects of transportation restrictions, we asked about the types and reliability of transportation used by the rice millers in the 30 days prior to interview. Recent effects have been small – 92 percent of mills reported that delivery times are as reliable now as at the same time in 2019, 75 percent stated that hired transport costs or fees are about the same, and, of millers who use their own transport, 96 percent reported no recent delays. Furthermore, 94 percent of millers said finding transporters is either easier (47 percent) or the same (47 percent) as last year.

One interesting response to the COVID-19 crisis has been an increase in cellphone use for business operations. Twenty-two percent of mills reportedly adapted their business practices or offered new services since the start of the COVID-19 crisis. The main adaptation reported has been

to either buy paddy or sell rice over the phone - reported by 21 and 20 percent of all mills, respectively. However, less than 2 percent of mills have adopted mobile/electronic payment methods – well below the adoption rate for other actors in the agri-food system (Goeb et al. 2020).

Figure 3. Rice millers' expected revenue in 2020 compared to 2019



Source: Rice millers phone survey – July 2020 survey round

The net effect of these disruptions and responses is a decrease in milling activity and revenues. Figure 3 displays millers' expected revenues in 2020 compared to 2019. Sixty percent of mills anticipate a revenue drop of at least 30 percent this year, while 20 percent expect a decrease of less than 30 percent. Only 3 percent of mills expect an increase. While a large share of mills from all size classifications expected revenue decreases, smaller mills tended to report expecting larger decreases than did medium and large mills. It is clear that the COVID-19 crisis continues to adversely affect Myanmar's rice millers.

Rice and rice byproduct prices

To further identify the impacts of the crisis on rice millers, we asked about their rice buying and selling activities and byproduct sales in the 30 days prior to interview. We collected detailed data on the highest and lowest buying and selling prices for their most important rice variety by volume. Figure 4 compares these data to the average variety-level prices collected during the 2019 in-person survey. Comparisons are at the mill-variety level. Note that any differences may be partly due to seasonality as we are comparing 30 days prior to interview in 2020 to an annual average from 2019.

Figure 4. Rice millers' prices in the 30 days prior to 2020 phone interview compared to 2019 average, at the variety-miller level

Source: Rice millers phone survey – July 2020 survey round and 2019 round.

For most mills, both purchase and sales prices are slightly higher than the 2019 average. In both graphs in Figure 4, the red line is the 45-degree line. Points directly on this line are mill-variety observations with equal prices in 2019 and 2020. Most points lie above it, meaning prices are higher in 2020 than they were in 2019. Interestingly, it shows that prices increase more for relatively cheaper low-quality varieties than for high-quality varieties (using unit price as a proxy for quality). There may be several drivers for this pattern. First may be the shock of COVID-19 on household incomes, which may depress domestic demand for more expensive high-quality rice. Second, Myanmar exports

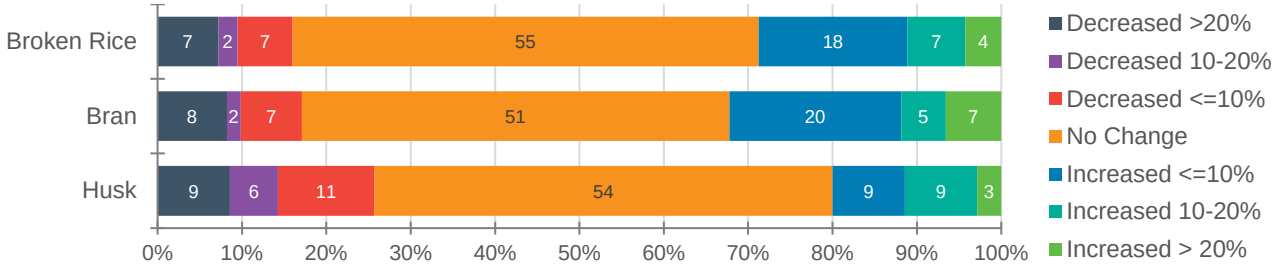
many rice varieties and not all are expensive, high-quality varieties. The government's policies intended to ensure a sufficient national supply of rice may have had differential effects on prices of different rice varieties. Future rounds of the phone survey of rice millers will help understand the effects of these policies on rice prices.

Using the observed purchase (paddy) and sales (milled grain) prices, we used the differences in these prices as a proxy for millers' margins (or profits), again comparing 2020 values to 2019. Millers' price margins observed in the 2020 phone surveys are similar to those observed in 2019 – consistent with Figure 4 as both purchase and sales prices increased. However, there are interesting differences in the high- and low-quality markets. Though margins have increased for low-quality varieties compared to 2019, they have decreased for high-quality varieties. Thus, mills producing greater volumes of high-quality rice varieties may now be more adversely affected financially due to lower margins.

Despite price changes, 86 percent of mills reported that they are storing rice for the same amount of time this year as they did in 2019. Mills that reported longer or shorter storage times cite fewer buyers or sellers as the reason they have changed their storage practices, rather than due to any expectation of future price changes.

In addition to rice buying and selling prices, we also collected data on milling byproducts, an important revenue source for rice mills. Almost all of the mills surveyed regarded byproduct sales as important to their business, with 71 percent viewing byproduct sales as "very important". The main byproducts from paddy processing are broken rice, bran, and husks. Most byproducts are sold domestically, though high-quality broken rice and bran can be exported. In the domestic market, lower quality broken rice is sold for further processing into food ingredients, such as rice flour for noodles, while the lowest grade, "*point*", is sold as pig feed. Bran and husks are mainly sold for livestock feed. Husks may also be sold as an inexpensive fuel source for food vendors.

Figure 5. Reported changes in rice byproduct prices compared to this time last year



Source: Rice millers phone survey – July 2020 survey round

To assess the effects of the COVID-19 crisis on byproduct prices, we asked mills whether there had been a change in sales prices for byproducts compared to the same time in 2019 (Figure 5). Roughly half of mills reported no changes in prices, with the other half split between price increases and decreases. For broken rice and bran, more mills reported price than price decreases. Rice husks – sold almost exclusively in the domestic market – show the opposite as more mills reported price decreases than increases. Interestingly, reported price decreases are greater in magnitude than reported price increases for each byproduct. It is particularly mills from Ayeyarwady that appear to be most negatively impacted by lower byproduct prices. Reported byproduct prices were not so sharply lower for mills in Yangon or Bago.

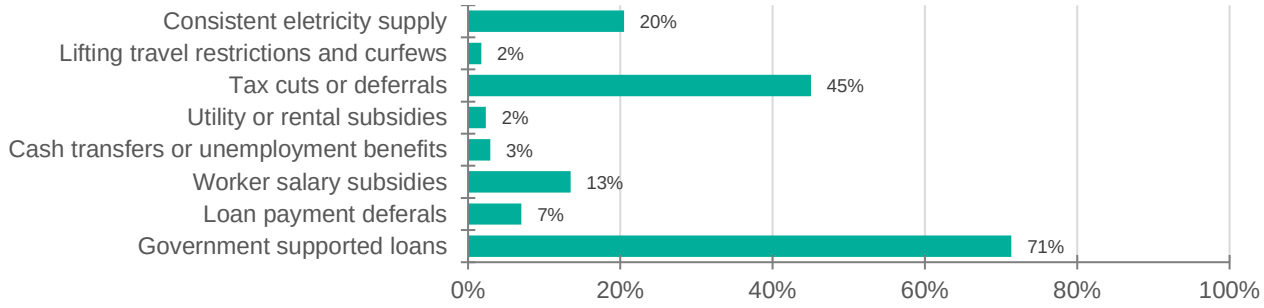
The price results show that some millers are experiencing lower margins than in 2019 and some are also suffering from large drops in byproduct prices. However, the magnitude of these decreases does not match the magnitude of expected revenue decreases shown in Figure 3. Furthermore, some rice varieties are showing increased prices and margins compared to 2019 and some mills are reporting byproduct price increases, which, other things being equal, should increase revenues.

There may be several factors contributing to millers' expectations of a drop in revenues in 2020. Mills may have experienced large losses or negative margins prior to our survey recall period of the prior 30-days. However, monthly average rice and paddy prices for 2020 from the Myanmar Rice Federation show no abnormal spikes or declines. Another possibility is that milling throughput has decreased for medium-and large-scale millers in our sample. This could happen if paddy production decreased or if milling throughput has increased for mills outside of our sample, e.g., small and micro mills closer to the paddy fields.

Preferred policies

Finally, we asked the rice mill owners and operators which from a set of potential policies government could implement would be most helpful for their business during the COVID-19 crisis (Figure 6). The most preferred policy response was government supported business loans. The second most preferred response was to cut or defer taxes. These policies would ease pressures created by the reduced cash flow rice mills are experiencing in 2020 relative to 2019. Though not necessarily directly related to COVID-19, consistent electricity supply was the third preferred selection. Worker salary subsidies, a policy which would further relieve cash flow constraints due to diminished business activity, was the fourth preferred policy option.

Figure 6. Most helpful government policies during the COVID-19 crisis, share of mills selecting option as a helpful policy



Source: Rice millers phone survey – July 2020 survey round

Recommendations

From the above analysis of phone survey data obtained from rice millers in Yangon, Ayeyarwady, and Bago in early and mid-July 2020, we derive the following policy recommendations.

- Continue and expand the government relief loan program offered to small and medium enterprises – Action 2.1.1 under the COVID-19 Economic Relief Plan (CERP) of the Government of Myanmar (GoM 2020). This would assist mills struggling with challenges related to the COVID-19 crisis. It would support these mills to stay in business despite large revenue reductions in 2020 relative to 2019, help ease the cashflow burdens arising from difficulties in recovering credit lent out to suppliers, and buffer small mills from new economic shocks during the continuing crisis.
- Government should extend tax relief to mills hard hit by the COVID 19 crisis through waivers or deferrals (CERP 2.1.3).
- Lift restrictions on rice exports and facilitate easier processes for export license procurement, such as through online licensing procedures and extending the time period for which licenses are valid (CERP 2.4.3). Millers are expecting large revenue declines in 2020 and increased export demand and higher prices for exported rice varieties would help lessen those losses and encourage continued investments in the sector.

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