

STRATEGY SUPPORT PROGRAM POLICY NOTE 47

MARCH 2021

Monitoring the Impact of COVID-19 in Myanmar

Rice millers – January 2021 survey round

To understand how Myanmar's rice value chain has been affected by the COVID-19 crisis, a series of telephone interviews is being conducted with more than 400 rice millers from Ayeyarwady, Bago, and Yangon. This report presents data from interviews conducted in January 2021.

Key Findings

- Transportation restrictions affecting rice sales declined in January 2021 relative to November 2020, but were still the main disruption, being reported by 34 percent of millers. Transportation costs were 6 to 9 percent higher than the year prior.
- Credit challenges became more apparent in January. More millers reported issues in collecting repayment from credit lent out (25 percent), difficulties repaying their own debt (8 percent), issues in obtaining new loans (12 percent), and increased demand for credit out (27 percent).
- Estimated total throughput for the monsoon harvest season was 7 percent lower on average in 2020 than in 2019. There were large differences across regions: Ayeyarwady reported the largest declines (10 percent) while Yangon reported small average increases (1 percent). Fifty-five percent of millers attributed the decline to lower paddy production.
- Between the November and January surveys, paddy and rice prices for Emata varieties increased by the same amount, holding margins constant. For Pawsan, paddy prices increased but rice prices fell, leading to the lowest margins for Pawsan since the surveys began.
- Both paddy and rice prices were higher in January 2021 than one year earlier. Emata varieties show large price increases–likely linked to export markets–while Pawsan had modest increases. Broken rice prices also increased by 9 percent year-on-year.

Introduction

This is the sixth policy note in a series presenting the results from telephone surveys with approximately 450 rice millers in three important rice-growing regions of Myanmar: Ayeyarwady, Bago, and Yangon. Mills are the most important link between farmers and consumers in the rice

value chain. Any serious shocks to rice mills will impact both rural rice-producing households and urban consumers.

The purpose of this series of phone surveys is to better understand how the COVID-19 crisis and corresponding policy responses have affected rice processing businesses. Starting in July 2020, we called the same sample of rice millers almost monthly, allowing us to track important disruptions during the monsoon harvests and the second wave of COVID-19 in Myanmar. This report presents results from the sixth survey round conducted in January 2021. Thus, it provides an overview of challenges during the monsoon harvest period. The analysis shows that COVID-19 transportation restrictions were much less disruptive compared to what was reported in previous survey rounds. However, transport costs were still 6 to 9 percent higher than one year prior. There was also an increase in credit related challenges as more millers applied for loans or had difficulties recovering repayment for credit they had lent out. Our results also add depth to the reported declines in throughput presented in previous notes. There were large regional differences in milling throughput, with Ayeyarwady experiencing the largest average declines of 10 percent. Most millers attribute this decline to reduced paddy production. Lastly, we show that paddy, rice, and broken rice prices in January 2021 were higher than one year prior. Emata varieties show large increases, particularly for paddy.

We interviewed 447 mills (Table 1) of which 352 were still operating in January, slightly after the peak of monsoon rice harvests. As in November, a high share of the closed mills (45 percent) reported being closed due to challenges caused by the COVID-19 crisis. An additional 22 percent were closed due to normal seasonality. We captured more detailed information for the 352 operating mills, so they are our focus in this analysis.

	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Jan-21
Operating mills	324	252	263	349	396	352
Temporarily closed mills	79	119	177	121	51	95
Total interviews	403	371	440	470	447	447

Table 1. Number of interviews with rice millers conducted by survey round

Source: Rice millers phone survey–July, August, September, October, November 2020, and January 2021 survey rounds

Effects of COVID-19 on the business operations of rice millers

In each survey round we asked millers about the COVID-19 challenges they faced in the 30 days prior to the interview and their responses to those challenges. Disruptions to selling milled rice and buying paddy driven by transportation restrictions have typically been the largest challenges throughout the survey rounds, and the January 2021 round is no exception (Figure 1). Selling and buying disruptions were reported by 34 and 30 percent of millers, respectively. On the milled rice marketing side, this is a large improvement from the 55 percent reporting such disruptions in November, suggesting that restrictions in urban areas and marketing zones lessened by January. Yet, on the buying side, disruptions increased between November and January, likely reflecting a lower supply of paddy late in the season.

There were also large increases in credit-related disruptions in the January survey, which may also be partially driven by seasonality. The biggest increase was in demand for credit from millers by farmers, rising to 27 percent of mills reporting, the highest level at any point in our surveys. This likely reflects increasing input demand ahead of the summer and monsoon crops. More troublingly, 25 percent of millers reported challenges receiving repayment from credit previously lent out, 8 percent reported difficulty repaying their own loans, and 12 percent reported challenges obtaining new credit. Each of these credit indicators was at their worst level since the pandemic's first wave.



Figure 1. COVID-19 disruptions to rice mills, share of respondents affected by survey round

Source: Rice millers phone survey-August, September, October, November 2020, and January 2021 survey rounds

Our data on miller responses to these disruptions in January 2021 show mixed changes since the November round (Figure 2). Smaller shares of millers changed rice sales channels (13 percent), supplier networks (11 percent), or their number of workers (13 percent). Furthermore, a smaller share adapted business services through increased use of information or communication technology (18 percent). However, the technology decline was driven by buying and selling over the phone (reported by 17 percent of millers), and there were increases in other areas. The highest shares of millers at any point in the survey rounds reported in the January survey offering delivery services of rice (10 percent), pick-up services for paddy (8 percent), and using mobile payment when buying paddy (4 percent). Adoption of safety measures appears to have increased dramatically in January, as more than 90 percent of mills adopted at least one practice to reduce transmission risks of COVID-19.

Figure 2. Rice miller business responses to the COVID-19 crisis, percent of respondents reporting in each survey round



Source: Rice millers phone survey–August, September, October and November 2020, and January 2021 survey rounds

Among the negative indicators, a higher share of millers reported reducing their days or hours of operations. A similar share reported having closed their business for at least one week. Yet, as in

other rounds, these results may be sensitive to holidays occurring in the recall period, including New Year, Independence Day, and Karen New Year for the January interviews. In line with the credit disruptions in Figure 1, a higher share of millers sought new loans in January–30 percent, the highest level since August 2020 when COVID-19 relief loans were made available. Fifty-seven percent of loan applicants were successful, with the most common loan sources being the Myanmar Agricultural Development Bank, private banks, and COVID-19 relief loans issued by the Union of Myanmar Federation of Chambers of Commerce and Industry.

In the January survey, we continued to track employed workers, storage practices, and mill operating days and hours. There were no major changes in employment in January relative to November. The median number of hired temporary employees (19) and median daily wage rates (7,000 MMK) were the same in both surveys. Storage practices also showed similar patterns in January as they did in November. About 30 percent of millers' storage capacity was vacant or used for purposes other than paddy or rice, while about 20 percent was used to store milled rice and 50 percent was used for paddy. Operating days and hours show only minor changes since November. In the January survey, the mills were operating for four more days on average in the previous 30 days, but the median number of hours per day was two hours less.

Monsoon season review

As part of the January survey round, we asked millers recall questions reviewing the monsoon harvest season. First, we asked millers where they most often purchased and sold their main rice varieties in the period of October through December in 2020 and 2019 (Figure 3). There are stark differences in the locations of purchases and sales. Purchases happen mainly within the mill's state/region (98 percent in 2019) and predominantly in the mill's township (74 percent in 2019). Thus, most paddy is purchased locally from the rural areas surrounding mills and a sizeable share (26 percent in 2019) is purchased directly at the mill. In contrast, rice sales typically happen in a different state/region (61 percent in 2019). Sales within the mill's state/region occur at similar rates at the mill, within the mill's township, and in a different township. There is a noticeable shift towards more local locations for rice sales in 2020 relative to 2019. In 2020, 49 percent of mills' main rice sales locations were within their state/region, compared to just 39 percent in 2019. There is a smaller shift for paddy purchases, but again it is towards more local areas.





Source: Rice millers phone survey-January 2021 survey round

We also asked millers about transportation costs to their main purchase and sales locations in January 2021 compared to the same time in 2020. Overall, reported transportation costs were 9 percent higher for paddy and 6 percent higher for rice. Interestingly, costs within the mill's own

township increased more in percentage terms (11 to 13 percent) than costs to other townships or states/regions (4 to 6 percent). This further confirms the more localized impacts of transportation restrictions identified in previous policy notes.

Previous policy notes in this series have documented lower reported throughput levels for a large share of mills in 2020 compared to 2019. In the January 2021 survey, we asked more detailed followup questions to better understand the magnitude of throughput changes. Specifically, we asked millers to recall their total monthly throughput for October, November, and December in both 2020 and 2019. If reported throughput was lower, we also asked mills to rank the reasons why.

Overall, 39 percent of millers reported lower throughput in the monsoon harvest season in 2020 than in the same season in 2019. Forty-four percent perceived no change, while just 17 percent reported an increase. Figure 4 presents more detail on the distribution and magnitude of these changes by showing the year-on-year percentage changes in total rice throughput by month and by state/region.





Source: Rice millers phone survey-January 2021 survey round

There are two key results. First, the magnitude of average decreased throughput is 10 percent or less in each state/region. For the full sample, the decline in throughput was 7 percent, perhaps a smaller change than might be expected from the large share of millers that reported declines in throughput. This implies considerable mill-level heterogeneity, which shows clearly in the second main result from Figure 4–the importance of regional variations. Ayeyarwady, the most distant from Yangon, has seen the largest declines in throughput (10 percent overall). Bago millers reported smaller, but still negative throughput changes each month. Conversely, Yangon millers reported an average 1 percent increase in throughput overall.

These differential impacts, together with the observation in Figure 3 that paddy is predominantly purchased locally, suggest that the regional paddy market is likely a key determinant of throughput. While our data show that millers in Ayeyarwady and Bago were more likely to report disruptions to paddy buying, the differences are minor-about 25 percent in Yangon compared to about 30 percent in Ayeyarwady. The more likely driver of throughput declines is reduced paddy production.

Lower paddy production was the most common reason cited for lower throughput among mills reporting a year-on-year decline (55 percent). Moreover, it was a much more common response for mills in Ayeyarwady and Bago (59 percent) than for those in Yangon (29 percent). Among those reporting a decline in paddy production, three-quarters cited it as the most important reason. Ayeyarwady and Bago millers were also more likely to report increased competition, which could stem from increased rivalry for relatively scarce paddy input. Our data also reveal an interesting result on the demand side. Millers in Ayeyarwady, where the regional varieties of Pawsan rice are

produced, reported lower rice demand at a much higher rate (23 percent) than in Yangon and in Bago (less than 5 percent), which do not produce large quantities of Pawsan. This may suggest lower domestic demand for the expensive and locally preferred Pawsan variety as a result of lower household incomes due to COVID-19 related economic shocks.¹

Prices of paddy, rice, and byproducts

One objective of our phone surveys has been to track price changes for paddy and rice throughout the monsoon season during the pandemic. Table 2 shows average paddy and rice prices as well as miller margins by survey round for the two main rice varieties, Sin Thuka, which is in the Emata family of varieties, and Pawsan Hmwe, which is in the Pawsan family. Between November and January, Sin Thuka rice prices increased by 14 MMK per pound, all of which was transferred to producers in higher paddy prices, holding milling margins the same. For Pawsan Hmwe, rice prices declined and paddy prices increased after the November survey, cutting down milling margins to their lowest point in our surveys. Greater volatility is expected for Pawsan varieties, as such varieties are consumed domestically but grown in only a limited number of townships.

Table 2.	Paddy	and	rice	prices	as	well	as	milling	margi	ns foi	' Sin	Thuka	and	Pawsan	Hmwe
varie	ties, Au	ugust-	Nov	ember	202	20 an	d J	anuary	2021 (MMK	per p	bound)			

· · · ·				\	. /
			2021		
	August	September	October	November	January
Sin Thuka					
Rice selling price	242	263	232	211	225
Paddy buying price	136	161	119	117	131
Margin	106	102	113	94	94
Pawsan Hmwe					
Rice selling price	342	347	362	334	317
Paddy buying price	176	213	191	178	185
Margin	166	134	171	156	132

Source: Rice millers phone survey – August, September, October, and November 2020 and January 2021 survey rounds. Note: Sin Thuka is in the Emata family of rice varieties. Pawsan Hmwe is in Pawsan family.

To better understand how prices have changed since 2019, the January 2021 and September 2020 surveys asked the millers surveyed to recall prices for rice, paddy, and byproducts for the same month one year prior. Figure 5 displays the average year-on-year percentage changes in prices for Emata and Pawsan categories, as well as for the two main byproducts–broken rice and rice bran.



Figure 5. Year-on-year price changes reported in January 2021 and September 2020

Source: Rice millers phone survey-September 2020 and January 2021 survey rounds

¹ Headey et al. 2020. "Combined evidence from a household telephone survey and micro-simulations". Myanmar SSP Policy Note 35. Washington DC: IFPRI (International Food Policy Research Institute).

Both paddy and rice prices were higher in January 2021 than one year earlier. Emata, in particular, had higher prices while Pawsan prices had modest increases. This likely reflects Emata's connection to export markets whereas Pawsan prices are driven by local consumers who have diminished purchasing power during the pandemic. Paddy prices show larger year-on-year increases than rice, suggesting that mills can sustain lower paddy-to-rice margins. Higher broken rice prices—the most important byproduct in value terms—may make lower paddy-to-rice margins financially viable for mills.

Comparing the year-on-year changes in January 2021 to those in September 2020, we see that price changes for paddy, rice, and broken rice were generally higher in January. However, the biggest difference was in bran prices, which were about the same in January 2021 as they were in January 2020 but 15 percent higher in September 2020 than one year prior. The primary use of bran is as feed for fish farms, which may reflect shifts in demand for aquaculture feeds.

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