



THE COVID-19 PANDEMIC AND HOUSEHOLD RICE CONSUMPTION PATTERNS IN ETHIOPIA: THE CASE OF ADDIS ABABA

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Research Note
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Key messages

- Rice consumption patterns among households in Addis Ababa before and during the COVID-19 pandemic indicate a decline in the frequency and volume of consumption.
- The observed trends for the frequency and volume of rice consumption are more or less the same across the different pre-pandemic wealth categories of households, before and during the COVID-19 pandemic, except in the richest category where there is an increase in the volume of consumption.
- While 21 per cent of households halted rice consumption, 21 per cent also started consumption after the COVID-19 pandemic.
- It is assumed that the observed trends are as a result of the combined impact of COVID-19, an increasing trend of rice consumption, and general economic factors prevailing in the country.
- Given an overall increase in the domestic price of rice, and limitations on rice imports, it will be important to further strengthen domestic rice production and productivity.

1 Introduction

The COVID-19 pandemic is affecting many aspects of human life, including food consumption patterns due to changes in food production and supply processes, and changing consumer behaviour (Aday and Aday 2020; Eftimov *et al.* 2020). Studies have shown an increase in consumption of some food items and decreases in other types of food. For instance, Hirvonen, de Brauw and Abate (2020) found an increase in the consumption of staple food crops and a decline in the consumption of legumes and vegetables during the first wave of the COVID-19 pandemic in Addis Ababa.

Changes in consumption habits, before the pandemic, have resulted in rice becoming one of the major staple food items in Ethiopia. The considerable increase in rice consumption has forced the country to import substantial volumes of rice. Rice imports grew from 22,500t in 2008 to 533,620t in 2019, with a decline in rice self-sufficiency from 70 per cent to 24 per cent during the same period (Alemu and Thompson 2020). COVID-19 has added additional challenges for the global rice market. Ethiopia's main sources of rice – particularly India and Pakistan and to some extent Vietnam – implemented full export bans of rice in an effort to contain the impact of the COVID-19 pandemic domestically (Sulser and Dunston 2020). This has had a considerable impact on the performance of the rice value chain in Ethiopia.

The outbreak of COVID-19 also resulted in moderate changes to the operation of the domestic rice value chain in Ethiopia. These were caused by changing responses of value chain actors (domestic and others engaged in rice imports) to the COVID-19 prevention measures put in place by the government. These changes increased the price of rice, which favoured rice producers and adversely affected urban consumers (Alemu and Thompson 2020).

This research note assesses household rice consumption patterns in Addis Ababa by comparing the situation before and during the COVID-19 pandemic, using a representative sample of households. The data were collected through in-person interviews between August and September 2019 and telephone interviews in August 2020 from 577 randomly-selected sample households in Addis Ababa. Both the 2019 and 2020 surveys asked the 577 households whether they consumed rice, and the frequency and volume of consumption over seven days prior to the survey.

All households surveyed were aware of the pandemic and government-led prevention guidelines, which was a similar result to a study conducted on the impacts of COVID-19 on food systems and rural livelihoods in the Fogera Plain (Assaye and Alemu 2020). Unlike rural areas in the Fogera Plain, where agricultural livelihood activities were not generally affected by COVID-19, in Addis Ababa livelihood activities had been affected, resulting in reduced self-reported income for more than two-thirds of respondents (Abate, de Brauw and Hirvonen 2020).

2 Changes in rice consumption

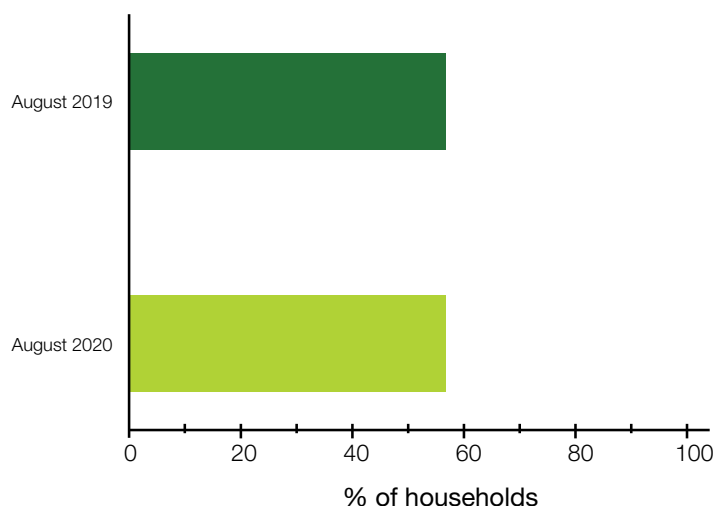
Projection data estimated the population of Addis Ababa to be about 4.8 million in 2020, and a 2016 Central Statistical Agency (CSA) survey indicated that 16.8 per cent of Addis Ababa's population had consumption levels below the national poverty line (CSA 2018a). The average household size is four members and about 44 per cent of households in Addis Ababa are headed by women (CSA 2018b).

Overall, about 56 per cent of households in Addis Ababa reportedly consumed rice over the seven days prior to the survey 2019 and 2020 (Figure 1).

However, a closer analysis of the data shows an interesting shift in household consumption. While the total number

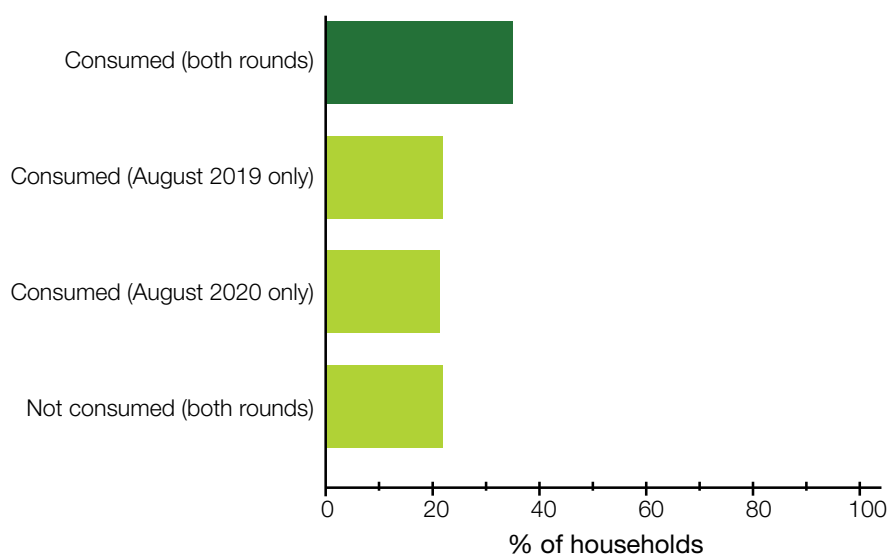
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Figure 1 Share of households that consumed rice by survey rounds (August 2019 and August 2020)



Source: Authors' calculation based on household surveys conducted between August and September 2019 and August 2020 by IFPRI

Figure 2 Changes in rice consumption: share of households reporting rice consumption in August 2019 compared to August 2020



Source: Authors' calculation based on household surveys conducted between August and September 2019 and August 2020 by IFPRI

of households that consumed rice was the same, some households had halted rice consumption by August 2020, and others had started consuming rice. About 36 per cent of sample households reported a continuation of rice consumption, and 22 per cent reported a continuation of not consuming rice. While 21 per cent of households who had consumed rice in August 2019 had stopped by August 2020, and 21 per cent who did not consume rice in August 2019 had started by August 2020 (Figure 2).

3 Changes in the frequency and volume of rice consumption

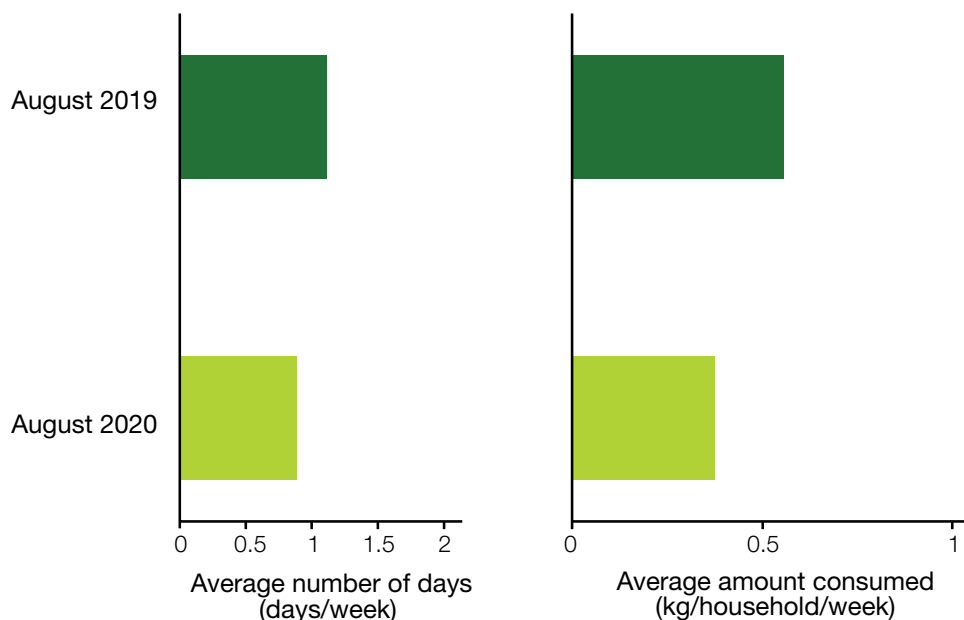
While the total number of households consuming rice in a seven-day period remained the same overall, the results

indicate a decline in the amount and frequency of rice consumed during the pandemic compared to August 2019 (Figure 3). For all of the respondents, there was a decline in consumption frequency, and the amount of rice consumption per household per week also dropped.

Considering wealth category, all categories saw a similar trend of declining frequency and volume of rice, except for the richest households that increased the frequency and volume of rice consumed, on average (Figure 4).

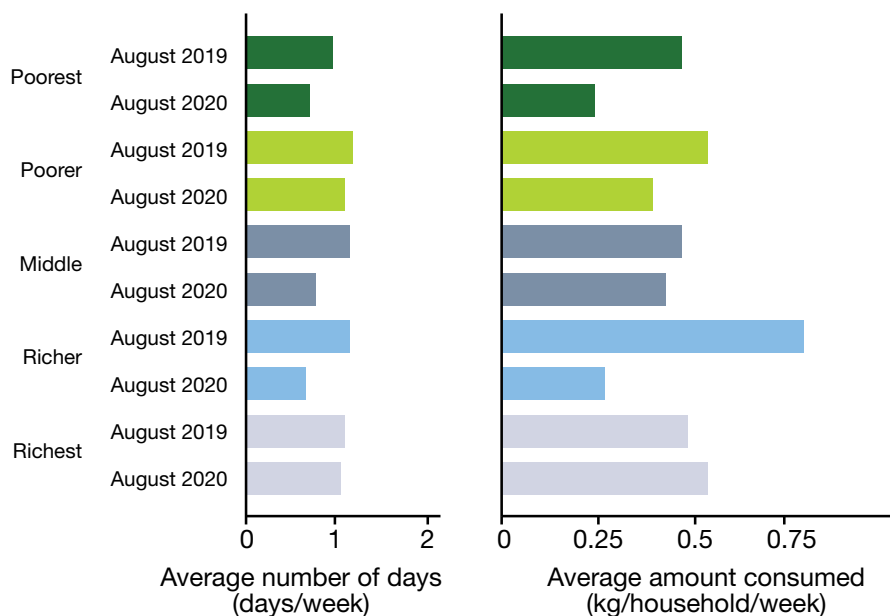
Overall, the volume of rice consumed per household before and during COVID-19 declined from 0.55kg in August 2019 to 0.37kg per week in August 2020 (Table 1). Households that had started rice consumption (21 per

Figure 3 Amount and frequency of rice consumption by survey rounds (August 2019 and August 2020)



Source: Authors' calculation based on household surveys conducted between August and September 2019 and August 2020 by IFPRI

Figure 4 Amount and frequency of rice consumption by pre-pandemic wealth index and survey rounds (August 2019 and August 2020)



Source: Authors' calculation based on household surveys conducted between August and September 2019 and August 2020 by IFPRI

cent) consumed on average 0.60kg per week, whereas those who had continued to eat rice reported a decline from 1.07kg to 0.69kg per week.

Table 2 presents the average frequency of rice consumption of households. The average frequency of consumption declined from 1.11 days per week to 0.88 days per week. Households which continued to consume

rice ate it more frequently (2.05 days a week), than those who had begun to consume rice by 2020 (1.52 days a week).

The overall trend before and during the COVID-19 pandemic indicated that 79 per cent of households had either stopped or reduced the volume of rice they consumed, and only 21 per cent had started consuming

Table 1 Changes in the volume of rice consumed in August 2019 compared to August 2020 (kg/household/week)

Category	Indicator	Amount consumed in August 2019 (kg)	Amount consumed in August 2020 (kg)
Stopped consumption	Mean	0.81	-
	STD	0.72	-
	Obs.	123	-
Started consumption	Mean	-	0.60
	STD	-	0.39
	Obs.	-	125
Continued consumption	Mean	1.07	0.69
	STD	2.96	0.46
	Obs.	202	202
Total	Mean	0.55	0.37
	STD	1.85	0.46
	Obs.	572	577

Source: Authors' calculation based on household surveys conducted between August and September 2019 and August 2020 by IFPRI

Table 2 Changes in the frequency of rice consumed in August 2019 compared to August 2020 (kg/household/week)

Category	Indicator	Consumption frequency in August 2019 (days/week)	Consumption frequency in August 2020 (days/week)
Stopped consumption	Mean	1.82	-
	STD	1.38	-
	Obs.	123	-
Started consumption	Mean	-	1.52
	STD	-	0.81
	Obs.	-	125
Continued consumption	Mean	2.05	1.57
	STD	1.36	0.92
	Obs.	202	202
Total	Mean	1.11	0.88
	STD	1.42	1.07
	Obs.	572	577

Source: Authors' calculation based on household surveys conducted between August and September 2019 and August 2020 by IFPRI

rice. The results further indicate that the majority of households consume rice either once or twice a week. Overall, the proportion of those who consumed rice more than one day per week had declined, therefore the

proportion of households who consumed rice only once a week increased from about 26 per cent in August 2019 to about 34 per cent in August 2020 (Table 3).

Table 3 Frequency of rice consumption in August 2019 and August 2020 (proportion of households)

Category	Year	Frequency of consumption						
		1	2	3	4	5	6	7
Stopped consumption	Aug-19	52.85	34.96	4.88	1.63	0.81	-	4.88
	Aug-20	-	-	-	-	-	-	-
Started consumption	Aug-19	-	-	-	-	-	-	-
	Aug-20	61.16	30.58	6.61	0.83	-	-	0.83
Continued consumption	Aug-19	41.26	33.50	14.56	5.34	0.97	-	4.37
	Aug-20	60.19	29.13	6.31	2.43	1.46	-	0.49
Total	Aug-19	26.04	19.44	6.25	2.26	0.52	-	2.60
	Aug-20	34.38	16.84	3.65	1.04	0.52	-	0.35

Source: Authors' calculation based on household surveys conducted between August and September 2019 and August 2020 by IFPRI

4 Conclusion

This research note looked at the changes in rice consumption in Addis Ababa before and during the COVID-19 pandemic. Urban dwellers in Addis Ababa were aware of the prevention measures put in place as a result of the COVID-19 pandemic, however the extent of compliance to the measures was found to be limited, especially after the end of the state of emergency. The responses to COVID-19 prevention measures by different actors of the rice value chain affected rice consumption both in terms of frequency and volume consumed. This resulted in an increase in the price of rice which favoured rice producers and adversely affected urban consumers.

The key findings in terms of changes in rice consumption patterns before and during the COVID-19 pandemic were:

- About 21 per cent of respondents halted consumption by August 2020, and almost the same proportion of respondents who had not been consuming rice in August 2019 reported starting consumption.
- Because of the COVID-19 pandemic, 79 per cent of households had either stopped or reduced the volume and frequency of rice consumption.

- In terms of rice consumption per week, there was a decline on average from 1.11 days to 0.88 days per week.
- The proportion of those who consumed rice more than once per week declined (i.e. most households reduced their rice consumption to only once per week).
- Wealth category, except for the richest, did not have an impact on the observed trends in the frequency and volume of rice consumption.

The reduced frequency and volume of consumption among households in Addis Ababa seems to be associated with the price increases of rice domestically. CSA data indicates an increase in the price of cereals in Addis Ababa by 157.4 per cent in August 2019 and by 191.7 per cent in 2020 compared to the price of cereals in 2016 (CSA 2020; CSA 2019). The changes in the observed trends are expected to be the result of a combination of the impact of COVID-19, the increasing trend of rice consumption, and general economic factors prevailing in the country. Thus, it is important to further strengthen ongoing initiatives to boost domestic rice production and productivity.

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