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Economic Impact of the 2020 COVID-19 Lockdown on Indian Farmers

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The impact of the pandemic on the farmers with different farm sizes is analysed. The changes in the income of farmers are highlighted, and the mitigation of the financial downturn by farmers using government cash transfers and sale of assets is explored. The change in the uptake of loans during the pandemic is investigated.

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Nearly one in two Indians are dependent on agriculture for their livelihoods (Ministry of Agriculture and Farmers Welfare 2020). This is not only income from cultivation but also wages from agricultural labour. A National Bank for Agriculture and Rural Development (NABARD 2018) survey conducted in 2016–17 found that about one-third of the agricultural household income comes from wages. The initial wave of the COVID-19 pandemic, in early 2020, and the public health response (for example, a strictly enforced, national lockdown) severely disrupted wage labour.

The objective of the study is to describe the financial impact from the farmers' perspective. First, it describes changes in farmers' income from wages and livestock over the course of the pandemic. Then, it explores how farmers have mitigated the financial downturn with the receipt of government cash transfers and sale of assets. Finally, the study explores how the uptake of loans has changed during the pandemic as compared to 2019.

Survey Methodology

We used data from a phone survey of 1,437 farmers conducted across 12 states between 3 and 15 May 2020. The same farmers were interviewed again twice during the phased reopening of the economy. The first follow-up survey was conducted between 3 and 19 June 2020 (1,052 [73%] responded) and the second follow-up survey between 20 July and 12 August 2020 (934 [65%] responded). The surveys and data set are available on the Harvard Dataverse* https://doi.org /10.7910/DVN/JZ511O (Jaacks 2021). This article focuses on the household economic indicators, including wages, livestock income, asset sales, receipt of government cash transfers, and loan uptake. All analyses were conducted stratified by farm size based on landownership: landless (0 ha), small/marginal farmers (0.01–2.00 ha), medium farmers (2.01–4.00 ha), and large farmers (>4.00 ha) (Ministry of Agriculture and Farmers Welfare 2020).

As compared to a nationally representative sample of agricultural households (Ministry of Agriculture and Farmers Welfare 2020), the survey sample is skewed towards having more men, higher educational attainment, younger age, fewer landless farmers and agri-workers, and larger landholding size. Thus, observed economic impacts in this analysis are likely to be conservative as the sample under-represents the most vulnerable.

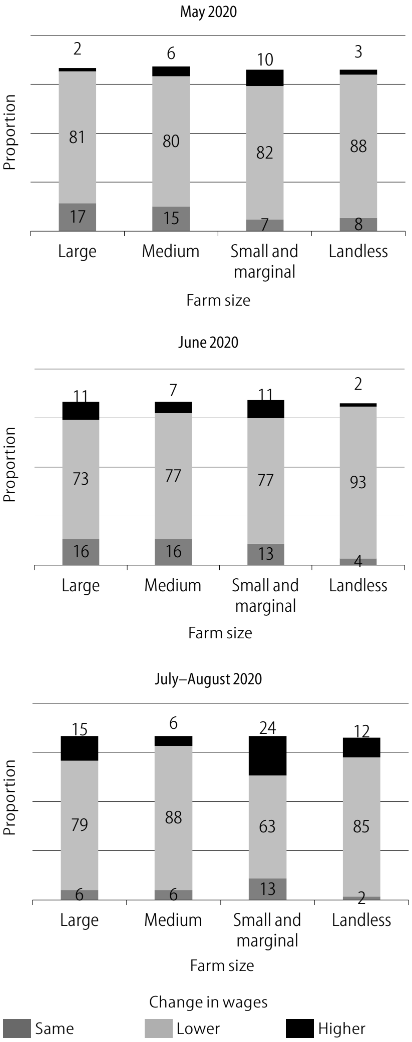
The survey protocol was reviewed and approved by the Harvard T H Chan School of Public Health's Institutional Review Board and the Public Health Foundation of India's Institutional Ethics Committee. All respondents provided verbal, informed consent.

Significant Wage Decline

The proportion of agricultural households earning an income from wages declined slightly from May to August 2020: 32% in May, 30% in June, and 25% in July–August. Specifically, from May to June, 32% no longer earned an income from wages and 12% started earning an income who were not before. From June to July–August, 38% of households no longer earned an income from wages and 9% started earning an income who were not before. Overall, our sample consisted of more large and medium farmers than the national average, and these farmers are less likely to earn an income through wages than small/marginal and landless farmers (21% and 17% of medium and large farmers earned an income from wages in our sample compared to 37% and 81% of small/marginal and landless farmers).

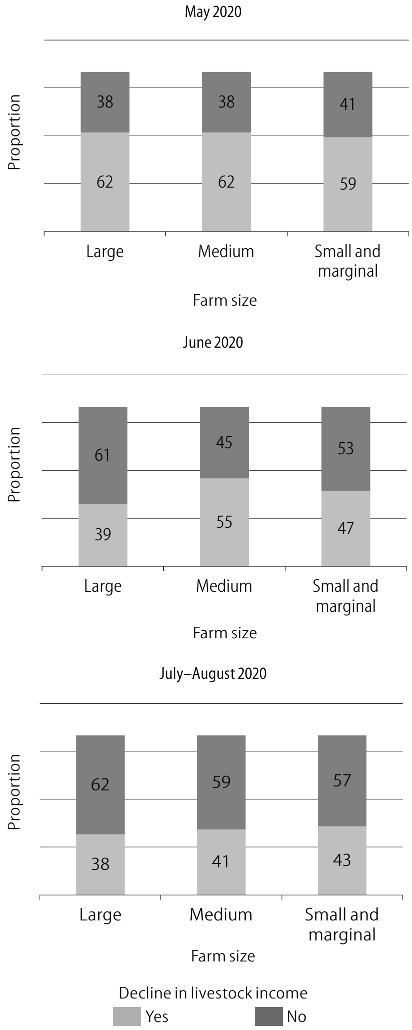
In terms of the amount of wage earnings, during the initial COVID-19 wave in May 2020, when the country was under

Figure 1: Trends in Wages (May to August 2020 over 2019) (%)



Sample size: 403 in May 2020, 302 in June 2020, and 226 in July–August 2020.
Source: Computed from the primary survey.

Figure 2: Declines in Livestock Income (May to August 2020 over January–February 2020) (%)



Sample size: May 2020, n = 370. June 2020, n = 169. July–August 2020, n = 171. Landless farmers were excluded due to small sample size (n<5).
Source: Primary survey.

earning lower wages as compared to 2019. Wages started to recover as the lockdown was eased, but recovery was far from complete. In the last survey, a large proportion of farmers still reported lower wages. Considering that wages contribute nearly one-third of agricultural households' income (NABARD 2018), these declines could have deleterious, downstream effects on household food security, education, healthcare, and other essential expenditures.

Prior to the COVID-19 pandemic, income from livestock made up 8% of the household income for farmers in India (NABARD 2018). For landless farmers, livestock represents almost 16.5% of the income (NABARD 2018). In our survey, 77% of farmers reported owning livestock. Of those who earned an income from livestock in January–February 2020, 28% were no longer earning an income from livestock in May 2020 and were exclusively using their livestock products for home consumption. By June and July–August, 47% and 40%, respectively, had switched exclusively to home consumption and no longer earned an income from livestock.

Most of the farmers who reported still earning an income from livestock reported a decline in earnings compared to the pre-lockdown period in January–February 2020: 60% overall, with a marginally greater proportion of medium and large farmers reporting a decline (62%) compared to small farmers (59%), though the difference was not statistically significant (p-value from exact test = 0.87) (Figure 2).

In comparison with January–February 2020, in June 2020, there was some recovery, with 47% of farmers experiencing a decline in income. Large farmers saw the biggest recovery, with 39% of farmers experiencing a decline in livestock income compared to 55% of medium farmers and 47% of small/marginal farmers (Figure 2, p-value from exact test = 0.24). By July–August 2020 (in comparison with January–February 2020), even fewer farmers (40% overall) reported experiencing a decline in livestock income, with similar differences across farm sizes as observed earlier in the lockdown (for example, larger farmers are least likely to report declines

a strict national lockdown, 80% or more of farmers had a decline in wages as compared to the same time in May 2019 (Figure 1). Landless farmers were the most likely to experience a fall in wages with 88% seeing a decline. Small and marginal (82%), medium (80%), and large farmers (81%) were all similarly likely to experience a decline in wages. This was against the backdrop of a 20-year trend of increasing wages for farm and non-farm labour (Kumar et al 2020). In May 2020, just 2% to 10% of farmers had an increase in wages.

In June, as the phased reopening began, a similarly large proportion of farmers had lower wages as compared to June 2019 (between 73% and 93%, Figure 1). Similar to May 2020, landless farmers were most likely to be affected in June. Between 2% and 11% of farmers had higher wages in June 2020 compared to in June 2019, a slightly higher proportion than seen in May, suggesting wages had started to recover. By July–August 2020, 6%–24% saw an increase in wages (Figure 1). Small/marginal farmers saw the biggest recovery, followed by large farmers. However, 63%–88% of farmers still had lower wages compared to in July–August 2019, thereby suggesting that a majority of farmers remained worse off during the pandemic. Landless farmers were the most affected.

In sum, we find that the trend of increasing wages in India was reversed during the initial COVID-19 lockdown in 2020, with the vast majority of farmers and have the greatest recovery over time). But it is not statistically significant: p-value from exact test = 0.34 (Figure 2).

In sum, a sizeable proportion of the farmers who were earning an income from livestock prior to the pandemic were no longer earning an income from livestock come July–August and were instead exclusively using their livestock products for home consumption. Whilst home consumption of livestock products promotes food security, dietary diversity, and improved nutrition, the loss of income from this source could have repercussions in terms of impacts on other household expenditures such as education and healthcare.

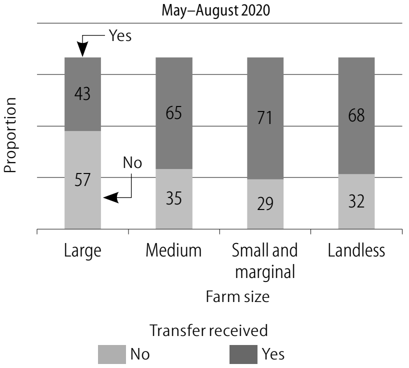
Government Cash Transfers

Immediately after the national lockdown, the union government announced a public transfer programme known as the Pradhan Mantri Garib Kalyan Yojana (PMGKY), costing $25 billion. In addition, several state governments offered cash transfers to labourers in an effort to mitigate the impacts of the lockdown on livelihoods. For example, Maharashtra provided ₹1,500 to construction workers, registered hawkers, and rickshaw drivers, among others.

It is found that 64% of agricultural households received a government cash transfer due to the lockdown sometime between May and August 2020 (Figure 3). This is higher than that reported by a previous phone survey conducted in April 2020, which found that only 53% of vulnerable rural households had received a cash transfer (Azim Premji University 2020). In contrast, a phone survey conducted in three states between April and May 2020 found that 95% of smallholders received benefits from at least one component of the PMGKY (Varshney et al 2021). It is important to note that whilst our survey sample was largely men (~95%), the survey asked if anyone in the household had received a cash transfer, thus capturing transfers to both men and women.

Large farmers were the least likely to receive a cash transfer (43%) and small/marginal farmers were the most likely (71%). Landless and medium farmers also had a high likelihood of receiving a

Figure 3: Receipt of Cash Transfers from the Government during the Lockdown (%)



Sample size: (n = 1,078).
Source: Primary survey.

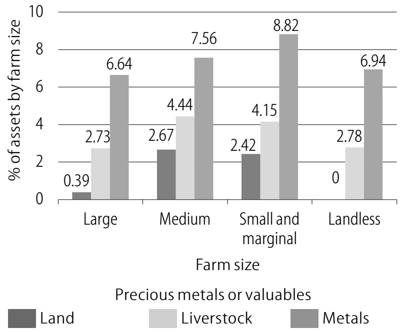
transfer, with rates of 68% and 65%, respectively. This indicates that targeted government cash transfers were effective in that they reached a majority of small, marginal, and landless farmers. However, about one-third of landless farmers did not avail of these benefits and so there is still substantial room for improvement.

Sale of Assets

Asset sales and increased borrowing are forms of coping used by households during times of economic distress. Households aim to preserve productive assets, such as land and livestock, for income generation even in financially stressed times (Ansah et al 2021). Before the COVID-19 pandemic, less than one-tenth of the households in India reported the sale of assets for healthcare payments, which are the most common cause of economic distress in India (Joe 2015). Our findings, detailed below, are in line with this pattern, with a larger proportion of farmers selling non-productive assets (valuables) as compared to productive assets (land and livestock).

We found that 14% of surveyed households reported selling assets due to the pandemic. Large farmers were least likely to sell assets: 10% compared to 14% of medium farmers, 15% of small/marginal farmers, and 14% of landless farmers (differences are not statistically significant, p-value form exact test = 0.31). While we captured asset sales of all types, three categories accounted for a majority of asset sales in this sample: 59% of those who sold assets sold valuables (gold/silver), 28% sold livestock, and 13% sold land. In terms of the type of asset

Figure 4: Proportion of Agricultural Households Selling Land, Livestock, and Valuables (%)



Sample size: (n = 1,131).
Source: Primary survey.

sold by farm size, there were no statistically significant differences (all p-values from exact tests >0.05) (Figure 4).

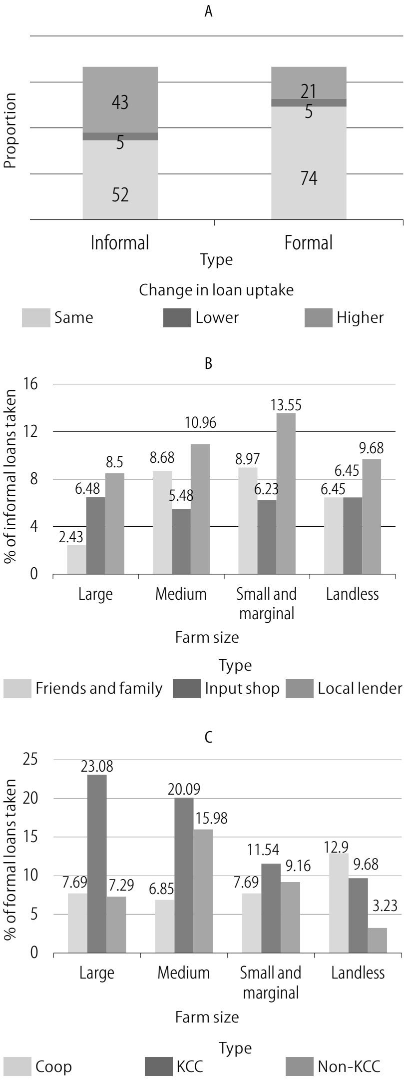
Increase in Informal Loans

Farmers were asked to report on whether they had taken a loan during kharif 2020 up until August 2020—their source of loan—and how the loan amount changed compared to kharif 2019. It is found that 63% of households had taken loans by August 2020; 35% had taken formal loans, 22% informal loans, and 7% both. According to the NABARD (2018) survey, only 44% of agricultural households nationally had reported taking a loan in 2015–16. Of these, 61% reported taking formal loans, 30% informal loans, and 9% both (NABARD 2018). The difference between the NABARD survey and our survey could relate to the COVID-19 pandemic or to differences in the underlying sample—our survey has more medium and large farmers compared to the NABARD survey, and these farmers are more likely to take out loans than small/marginal farmers.

It is found that more farmers saw an increase in the amount of informal loans than in the amount of formal loans (Figure 5, Panel A, p 34): 43% of farmers experienced an increase in the informal loan amount and 21% of farmers experienced an increase in the formal loan amount.

The most commonly taken informal loans were those from local lenders, with 12% of farmers taking them (Figure 5, Panel B). This was followed by loans from friends and family (7%) and loans from input shops (6%). Reliance on informal loans was similar across farm sizes,

Figure 5: Patterns of Loan Uptake during Kharif (Monsoon) 2020 (%)



Panel A (n = 403) is the proportion taking higher, lower, or the same value of informal and formal loans. Panel B (n = 1,043) is the proportion of all surveyed households taking informal loans from friends/family, local lenders, or input shops, by farm size. Panel C (n = 1,043) is the proportion of all surveyed households taking formal loans non-KCC, KCC, or Coop, by farm size.
Source: Primary survey.

though large farmers were less likely to rely on loans from friends and family (2% versus 9% among small/marginal and medium farmers).

The most commonly taken formal loan was Kisan Credit Card (KCC) loans (16%), followed by non-KCC loans (10%), and cooperative institution loans (8%) (Figure 5, Panel C). Large farmers were most likely to take out KCC loans (23%), followed by medium farmers (20%); small/marginal farmers were substantially less likely (12%, p-value from exact test<0.0001). This is consistent with the NABARD reporting that 24% of medium and large farmers have KCC loans in 2016–17 (NABARD 2018). We find that medium farmers display the highest uptake on non-KCC loans (16% versus 7% among large farmers and 9% among small/marginal farmers, p-value from exact test = 0.008).

Conclusions

In sum, we find that the trend of increasing wages in India was reversed during the initial COVID-19 lockdown in 2020, with the vast majority of farmers experiencing lower wages compared to 2019. Wages started bouncing back as the lockdown was eased, but recovery was far from complete. Many farmers who were earning an income from livestock before the pandemic were no longer earning an income from livestock, and a significant proportion of those who were still earning an income had experienced a decline in income earned over the course of the pandemic.

A majority of landless, small and marginal, and medium farmers received some form of government cash transfer. This indicates that transfer disbursement was effective. Even still, through the pandemic, 14% of farmers reported selling assets. We also found that among those farmers taking loans, the amount for informal loans increased by 43% compared to kharif 2019.

Agriculture was the only sector that grew during the pandemic but cultivation is not the only source of income for agricultural households. Other sources account for more than half of farmers' income (NABARD 2018) and those sources were all negatively affected by the pandemic, as shown in our results. Thus, these findings suggest that the progress on doubling farmers' incomes has been reversed during the pandemic. Moreover, these data were collected prior to the most recent wave, which severely affected rural areas, so the situation may be even worse today than it was last year. Continued efforts are needed to monitor the situation and implement policies to protect farmers' income from all sources.

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