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The impact of the COVID-19 pandemic on the poor: Insights from the Hrishipara diaries

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1. Introduction

Poor households in low-income agrarian societies face a variety of shocks to their livelihoods, from economywide shocks such as increases in food prices to village-level climatic shocks such as droughts and floods, and idiosyncratic shocks such as illness or death within the household (Dercon, 2002, 2004; Krishna, 2010). Typically, poor rural households adjust to these shocks by using a variety of coping mechanisms such as self-insurance through savings and informal risk-minimization strategies, and borrowing from banks and microfinance institutions (MFIs), moneylenders, and friends and family (Townsend, 1994). However, rarely have poor households in low-income societies faced generalized shutdowns of economic activity such as occurred during the COVID-19 pandemic. The pandemic affected the economic life of poor households in low-income rural societies directly through the increased risk of falling ill with the virus if households went about their normal lives working on their farms and in the non-farm economy. The pandemic also affected poor households’ livelihoods indirectly through the introduction of draconian lockdown policies by national governments in developing economies, which shut down economic activity for prolonged periods. Not only did lockdown policies lead to a cessation of market and non-market economic activities, but they also led to the temporary closure of MFIs, which effectively meant that households could not use the coping mechanisms to which they would normally resort in times of crisis, such as loans and savings withdrawals. Furthermore, the ban on movement within and outside the villages where they resided also meant that households could not visit their extended

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families in search of financial support. What was the effect of the pandemic and associated lockdown policies on the livelihoods of poor rural households, and how did these households cope during the pandemic? In this paper we examine the impact of the pandemic on the livelihoods, incomes, expenditures, and financial transactions of 60 poor and very poor households in a semi-rural setting in Bangladesh.

An emerging literature has begun to examine the effects of the COVID-19 pandemic on the economic lives of the poor in developing societies using large-scale phone surveys (Ceballos, Kannan, & Kramer, 2020; Egger et al., 2021; Kansiime et al., 2021; Mahmud & Riley, 2021; Malik, Meki, Morduch, Ogden, & Quinn, 2021; Schotte, Danquah, & Osei, 2021; Surbhi, Abraham, Lahoti, Nath, & Basole, 2021). In this paper, we contribute to this literature using an unusually rich data set that tracks the economic and financial transactions of 60 individuals and their families in a rural setting in Bangladesh on a daily real-time basis for 12 months, from 1 October 2019 to 30 September 2020. For the previous five years these households had volunteered as respondents in a ‘financial diaries’ study known as the Hrishipara Daily Diaries Project (HDDP, 2021). The quantitative data that is collected daily is supplemented with regular and one-off surveys covering many aspects of the diarists’ lives, as well as life history interviews with several of the diarists. The advantage of this data set is that it allows us to examine individual diarists’ behavioural responses to the pandemic with a granularity that is not possible with large-scale phone surveys.

Our paper uses a mixed methods approach: we combine qualitative case studies of five diarists with a quantitative analysis of the daily data extracted from the diaries. We use detailed transactions data on incomes, expenditures, loans, savings, gifts received and given, and remittances to analyse the impact of the pandemic (until September 2020), and in particular the government lockdowns, on the economic and financial transactions of the 60 diarists. Our period of analysis covers six months of the pre-pandemic period (October 2019 to March 2020), the two months when the government of Bangladesh enforced a lockdown (April and May 2020), and four months after the lockdown was lifted (June to September 2020). Therefore, our analysis covers both the pre-pandemic and pandemic periods, allowing us to ascertain how the economic lives of the poor evolved during the pandemic by comparing their incomes, expenditures, and financial transactions in the pandemic period with the immediate pre-pandemic period.

Using our case-studies, we document the behavioural responses to COVID-19 by individual diarists, which reveals the varied experiences of the poor during the pandemic. The case studies highlight the financial hardship to which the pandemic contributed among the poor, as well as the different coping strategies followed by the diarists. Further, we find from the quantitative analysis that the pandemic had a significant negative impact on the livelihoods of the poor in our study, with financial inflows and outflows, incomes, and household expenditures far below pre-pandemic levels in the pandemic period, although expenditures did not decline as much as incomes. Exploring the coping mechanisms that households used to adjust to declines in income and their lack of access to formal and informal sources of finance, we find that households drew down on their cash reserves at home, as well as cutting down on non-food expenditures to protect their spending on food.

The rest of the paper is in six sections. Section 2 describes the context of our study as well as the history of the evolution of the pandemic in Hrishipara. Section 3 discusses the diary method used to gather the data used in the study. Section 4 provides five case studies showing how individual diarists coped with the pandemic. Section 5 introduces the quantitative data and examines the impact of the pandemic on livelihoods in Hrishipara using the data. Section 6 discusses the coping mechanisms used by the diarists. Section 7 concludes.

2. Context

In this section, we describe the local context of our study and the evolution of the pandemic in the study area.

2.1. The study location

Our study is of sixty households living in the outskirts of Kapasia, a market town in central Bangladesh. The households are all volunteer respondents in a financial diaries project which started in the low-caste Hindu settlement of Hrishipara, just across the river from Kapasia’s main market, but then expanded to include both Muslim and Hindu households in the wider Kapasia area.

Kapasia town is moderately prosperous, with good road connections with the capital, Dhaka. In most measures of economic and social progress in Bangladesh, the Kapasia sub-district is middle ranking. It has slightly fewer poor households than elsewhere but more of those households are classed as extreme poor. It has always done well in education and has a relatively high rate of school attendance. It lacks industry but enjoys remittance income from many expatriate workers in the Gulf and South-East Asia. It is well served by banks and MFIs, has well-organized covered markets, and has attracted some major institutions such as a skills-training center for expatriate workers. In national and local elections it favours the Awami League, the party currently in power.

Additional information about the area, including maps, can be found in the Appendix A1.

2.2. The arrival of COVID-19 and the lockdown

After Bangladesh’s first cases of the virus were confirmed on 8 March, events moved quickly, as the Timeline shows (Table 1), and from 26 March a national ‘general holiday’, amounting to a lockdown, (or “bhondo ghosona”) was enforced, harshly at first with both police and the army on the streets. In the study area most local people, already frightened by media stories of the ferocity of the disease, and believing the lockdown would be short-lived, stayed indoors. With buses and trucks halted, prices of goods that normally come in from outside the area rose, while local produce that is usually exported to Dhaka lost value, creating opportunities for local entrepreneurs to set up ad-hoc market stalls.

Banks were open with restricted hours. But our study respondents use Microfinance Institutions (MFIs) more often than banks, and the MFIs were ordered to close, causing an abrupt slow-down in the savings and loan transactions of our respondents (Fig. 1). The MFIs had no choice but to close their doors. Some, notably BRAC, tried to reach clients through mobile money transfers, but there were no such transactions in our area, and throughout April’s
strict lockdown the mobile money agents were partly closed. The leading financial Co-op kept operating, hiddenly, but made only a few transactions, mostly savings-withdrawal. Diarists transacted with their informal partners, though not as frequently as before the lockdown. The MFIs didn’t reopen until after the end of the lockdown at the end of May, and in terms of the amount of money flowing through savings and loans, May’s total was even lower than April’s. Even when they did finally reopen their doors, the MFIs were constrained by the regulators from pressing their clients too hard for repayments on loans, and as a result lent less.

Table 1
Time-line of Pandemic in Hrishipara and Bangladesh.

| 2020       | National                          | Local                                      |
|------------|-----------------------------------|--------------------------------------------|
| March 08   | First 3 cases confirmed           | Anxiety level begins to rise               |
| March 18   | First death                       | At first the ‘holiday’ is strictly enforced: |
| March 20   | Government ponders a ‘holiday’    | Shops are closed and transport halted, with 348 arrests in the area for breaking the rules |
| March 26   | 10 day ‘general holiday’ starts   |                                            |
| April      | ‘General holiday’ twice extended  | Hrishipara youths barricade the settlement |
| April 14   | Confirmed cases reach 1,000       | The first and only ‘diarist’ becomes infected |
| April 19   | ‘General holiday’ again extended  |                                            |
| May 4      | Eid al Fitr festival              | ‘Holiday’ less strictly enforced           |
| May 24     | ‘General holiday’ ends            | Hrishipara barricades removed             |
| June 18    | Confirmed cases reach 100,000     | Surge in overseas remittance receipts      |
| July       | Confirmed cases reach 200,000     |                                            |
| July 18    | Eid al Adha festival              | A ‘new normal’ becomes entrenched         |
| August     |                                   |                                            |

Source: authors’ illustration.

Fig. 1. Daily count of diarists’ savings and loans transactions with MFIs, cooperatives, and informal partners, March to May 2020, transactions per day Notes: i) MFI: Microfinance Institutions are all “Grameen style” with mostly weekly group meetings ii) Informal: Informal Transactions are with friends or relatives and often interest-free, or are community-based savings and loan clubs iii) Co-op: Cooperatives tend to provide a daily service: their transactions are therefore greater in number but lower in value than those of MFIs, and they serve individuals, not groups. Source: authors’ calculations based on data from HDDP.

disease more. On 19 April one of the diarist households – a couple with jobs at the local hospital – were confirmed to have the virus, along with several colleagues. They isolated at home, and recovered, and no other diarist tested positive for the disease during the period of the study.

In mid-April the government announced that relief distributions of both rice and cash were to be targeted to the poor, but in the project area little of this arrived. Instead, better-off households gave baskets of essentials to their poorer neighbors, and were joined by some NGOs, private companies, political parties, and religious groups: but enthusiasm for this quickly waned.

2.3. Easing and ending of the lockdown

May saw a second milder version of the lockdown in force. The army was withdrawn. The police, having initially frightened people into staying at home, relaxed, despite government calls for them to maintain vigilance. A mood of ‘OK, we have to live with this’ took
over. People were finding ways round the lockdown: rickshaw drivers helped people move around in the early morning, before the police were about, and building sites distant from main roads resumed work. Shops got better at opening when they judged the police wouldn’t notice them. Trucks reappeared on the roads. The barricades round Hrishipara were dismantled because, as one of the young men involved said ‘we thought things were improving and in any case, people need to move around to earn money’. The lockdown was officially lifted on 1 June.

The post-lockdown period in our study area can be broken down into two sub-periods. The first, 1 June–31 July, ended with the Islamic holiday of Eid-al-Adha. Remittances from family members working overseas started flowing in large amounts, as many of the expatriate workers started earning again in July. Clothes shops had reopened by late May, and people bought their Eid finery in the run-up to Eid-al-Adha. In the second sub-period, 1 August-30 September, the increased level of spending that was witnessed during the festival season, came to an end. However, by August, life for most people had settled into a new normal. The pandemic remained an ever-present reality in Bangladesh, with an average of 1500 new coronavirus cases a day for the month of September.

3. The Hrishipara diaries

Diaries have long been used as a research method in the social sciences, but it was not until the close of the 20th century that they were adapted to look into how people manage their money (Collins, Morduch, & Rutherford, 2009; Collins, 2008; Kamath & Mukherji, 2008; Morduch, 2017).

The diary method used in this study was designed in May 2015 for a small financial co-operative, Shohoz Shonchoy (‘easy savings’), which had been set up in the Hrishipara settlement in 2002. The diaries were first used to track the fortunes of a handful of the co-operative’s poorer clients, but the number of diarists was soon increased to 60 of whom fewer than half have accounts at Shohoz Shonchoy.

For this paper, it is important to note that the 60 diarist households had all been selected years before the pandemic began. Their selection had not aimed to be statistically representative of the local population, but to provide a range of extremely poor, poor, and near-poor (but not rich) households, with a wide variety of occupations (see Table A1 in the Appendix) and including both main religious communities: of the 60 households, 36 are Muslim and 24 Hindu. Of the principal occupations of our 60 diarists (for many have multiple jobs), 34 are self-employed (typically in small-scale retailing or transport), and 26 are wage employed (typically as casual labourers). The poorest is an illiterate widow who does odd jobs for market stallholders. The richest include a farming household with about a hectare of land, and a couple who earn government salaries as low-grade hospital staff.

Despite differences in religion and in income, the 60 households share many similarities. Though Muslims and Hindus avoid the foods their religions forbid, their basic diets are the same. They shop in the same markets, ride in the same rickshaws, and join the same MFIs. Rich and poor go to the same mosques or temples, and Muslims and Hindus often take some part in each other’s festivals. Our records show some differences in the transactions of Muslims and Hindus. The median income of the Muslims is about a third higher than that of the Hindus, and they borrow more, and spend more on snack foods and on home construction. But the amounts they save, and their spending on food, education and healthcare, are similar.

Households enrolled as diarists are paid BDT100 (about US $1.17) a week as a reward. Every household that was approached agreed to participate, and only two dropped out (one of whom subsequently returned). In each household the project selected, as the diarist, the household’s ‘money manager’ through whose hands most or even all of the household’s money passes. Having one respondent per household simplifies the data collection, and collecting data every day, seven days a week, cuts out reliance on recall and improves data accuracy. Weekly resolutions that compare how much money the diarist has at home with his or her money flow during the week provide a further check on quality.

The diary project’s focus is on household finances, so our diarists are household money-managers but not necessarily household heads: a female diarist does not imply a female-headed household. Our transaction records do not reveal big differences between households with male or female diarists. Median net incomes are similar. Female diarist households attract somewhat more cash gifts (there are several widows in the sample), and receive more money remitted from overseas (mostly the men go abroad leaving their women to manage the household). Female diarist households also spend more on education and less on snacks, but households of male diarists tend to borrow and save more. The project occasionally explores, through one-off surveys, other aspects of gender difference. In one survey, for example, both men and women agreed that the burdens of surviving the lockdown, especially managing children whose schools were closed, fell more heavily on women.

Shohoz Shonchoy staff manage the diary data collection. They are modestly educated local people who share the culture and language of the diarists and have come to know them well over many years. A team of four such collectors (three women and one man) visit each diarist daily, usually in the evening. There is no interview instrument. The collectors simply ask ‘what money came into your hands today, and what went out?’ They record the answers—the amount and description of each transaction—and even ‘inflow’ and ‘outflow’ sections, adding explanatory notes if needed (see Fig. A2 in the Appendix). They also add details about the household, which helps the project to build up its understanding of the social and personal drivers of money management behaviour. In addition to the daily collection of transaction data, the project runs both regular and one-off surveys covering many aspects of the diarists’ lives, and delves deeply into their life-histories using interviews. We provide further details of how the HDDP data is collected and a profile of the diarists in the Appendix.

There are no daily financial diaries running elsewhere in Bangladesh, as far as we know, so it is not possible to directly compare findings drawn from similar methodologies. However, Microfinance Opportunities (MFO), based in the US, has been running weekly diaries among garment factory workers in Bangladesh, and these diaries, like ours, began before and extended through the pandemic period.

4. The many lives of the poor during the pandemic

The pandemic and its lockdown affected all sixty of our respondents, and any of their stories would reveal insights of interest to researchers. In choosing the five case studies presented here we aim to illustrate the main findings of our study. Case study 1, for example, describes the abrupt collapse in incomes and the subsequent partial recovery, common to nearly all respondents. But we also aim to show the range of responses to the disaster made by people of varying occupations, income levels, faiths, personalities, and family situations.

4 However, the project has dropped some diarists: for example, ten went when the project faced some funding constraints.
4.1. Case study 1: Liaqat, a self-employed newspaper vendor

Liaqat has been selling newspapers for more than 25 years. A person of habit, he followed the same routine every day. Early morning, seven days a week, he bought 220 newspapers for BDT930 from a local wholesaler. He sold about half of them on the street for cash and delivered the rest to regular customers, who paid him in arrears. Averaged out over the years, his sales exceeded his stock purchases by just over 40 per cent. As Fig. 2 shows, this pattern ended abruptly on 25 March 2020, the last day before the lockdown started.

In early March, the papers Liaqat sold were treating the COVID-19 outbreak as an overseas story, but on 18 March they reported the first death. On 23 March there were rumours of a cluster of cases in a nearby village and on 26 March, Liaqat stayed at home. He could have bought stock, but there were too few people on the streets to sell to, and he was frightened of catching the virus. In April he sold no papers, though he received some payments from credit customers.

By 18 May, Liaqat was confident enough to buy stock again, though at a much-reduced volume. By early June he was buying at about two thirds of his pre-pandemic rate; by mid-August he had settled on a new normal of 80 per cent of his former rate. He enjoyed a few good weeks in late May and early August, when more of his credit customers paid their bills.

The family’s first response to the shock of the lockdown was to cut back on all spending other than food. Food used to comprise about a quarter of their spending but in April it was more than half. In May food spending rose for the festival of Eid al-Fitr and in July it rose again, sharply, ahead of the festival of Eid al-Adha at the end of the month. The rebound was largely made possible by selling, for BDT36,000, the cow they had anyway been rearing to sell ahead of Eid, when prices are high. To celebrate their own Eid, they bought a BDT18,000 share in another cow.

Liaqat’s case illustrates the pattern that we will explore in more detail with the quantitative data in the next section: a collapse in sales, this pattern ended abruptly on 25 March 2020, the last day before the lockdown started.

4.2. Case study 2: Radhu, a casual wage labourer

Radhu, a widow of about 50, became HDDP’s first diarist in May 2015, and she is possibly the poorest, living on less than a dollar a day (PPP). She works in the local market, carrying water for stallholders, sorting onions, or helping to load goods for the hizra, a transgender group who survive by taking gifts from stallholders in return for not disrupting the market.

Radhu’s total income for February to September 2020 was less than BDT5,000, and her expenditure was even less, since despite her poverty she saves almost every day, including all of the US$1 per week she receives for being a diarist. Because she never drew on her savings, she had built up a large savings balance of BDT58,000 at the co-operative. But she did not draw on these savings to get her through the lockdown, because in her mind these savings belong to her as-yet unmarried daughter and are therefore not to be touched.

In April and May, with the lockdown enforced, she was blocked from the market by fear and by the police, and her earnings fell sharply. As Fig. 3 shows, she later drastically cut her spending.

Her income recovered from June onwards, but her spending, especially on food, did not, remaining flat throughout September. One reason was that in April and May, unable to go to work, Radhu started doing housework for her sisters-in-law, in whose homestead she lives, in return for food. She still does so, although it is too early to say whether this marks a permanent shift in her lifestyle. She also received a little food relief from public and private sources. Another reason was that a marriage possibility for her daughter emerged, driving Radhu to save more than ever. In September, for example, she saved BDT290 over and above her participation reward from the diary project.

Radhu’s case shows that the pandemic had persistent negative effects on the food expenditures of the poorest households, even though incomes showed a recovery in the post-lockdown period. It also illustrates a very cautious attitude towards drawing down on savings.

4.3. Case study 3: Rezia, a cake shop owner

Some households entered the pandemic period with their lives already in turmoil. That was the case for Rezia, her husband, and their two sons. In 2017 Rezia had started a small shop selling hot cakes. Her husband disapproved, they quarrelled, and she spent a few unsuccessful months working in Saudi Arabia. When she returned, a reconciliation with her family took place. She restarted the shop and made her first sales in November 2019. Other sources of income were her husband’s work as a rickshaw puller and her two sons’ semi-skilled manual jobs.

January 2020 was a good month: Rezia grossed BDT14,000 from her shop, her husband earned BDT11,000 with the rickshaw, and the sons contributed BDT13,000 from their jobs. That was more than enough for their business costs and household spending, and they repaid BDT15,000 to two MFIs. In February 2020, the elder son lost his job, and the husband’s earnings shrank, but Rezia plunged ahead: she took a fresh loan of BDT60,000 from one of the MFIs and bought a refrigerator for the shop. More money passed through their hands in February than in any subsequent month. In March takings at the cake shop reached BDT26,000. See Fig. 4.

Then came the lockdown. In April, the lockdown closed the cake shop and the younger son’s metal workshop, and halted rickshaws. Household expenditure collapsed to BDT2,000, paid out of cash reserves that Rezia had been keeping at home (Fig. 4). Fortunately,
the MFIs were closed, so Rezia did not have to make any loan repayments. July saw a recovery, with good cake sales in the run-up to the Eid al-Adha festival. The elder son got his job back, and both sons contributed earnings to the household. But August was another bad month. The elder son had a debt from a failed business venture the year before, and the creditor was pressing for payment. It had to be paid, so they sold the husband’s rickshaw. The MFIs started looking for repayments again, and Rezia paid them, eager to keep this line of credit open. These shocks helped Rezia to impose more discipline on her unruly family: for the remainder of the research period, Rezia ran her shop, and her husband and elder son brought in regular, if modest, incomes. They did not borrow again, but they kept up with their MFI loan repayments. Their expenditure remained lower than at the beginning of the year, but the household economy now looked more stable.

Rezia’s case illustrates how the pandemic interacted with the diarists’ pre-existing vulnerabilities, leading to a calamitous decline in incomes during the lockdown period. At the same time, the case study shows the resilience of the poor, even in the most difficult of circumstances, and the disproportionately large share of responsibility for the household borne by many of the women diarists.

4.4. Case study 4: Samarth, a small farmer turned trader

At first glance, Samarth is a typical small farmer. He owns about a tenth of a hectare of farmland, and sharecrops other land, growing rice and vegetables. From his small home on the edge of the Hrishipara settlement open land stretches down to the river, where he grazes one, two, or sometimes three cows.

But his path through the COVID-19 pandemic proved unusual. He exploited the lockdown’s closure of the transport system. Local farmers, desperate to offload produce they would otherwise have exported to Dhaka, let him buy at low prices, and he sold it on the street inside Hrishipara, which had barricaded itself off from the outside world. As Fig. 5 shows, he did this for a month from 21 April. It boosted his income, but it was not profitable: his outlay

Note: In Bangladesh Taka

Fig. 3. Monthly income and expenditures for Radhu, March to September 2020. Note: In Bangladesh Taka. Source: authors’ calculations based on data from HDDP.

Note: In Bangladesh Taka

Fig. 4. Main transactions by category for Rezia, monthly, January to September 2020. Note: In Bangladesh Taka. Source: authors’ calculations based on data from HDDP.
exceeded his sales. His family ended up eating much of the remaining stocks that he had bought.

He was already immersed in a grand scheme for his son, a vocational school graduate. In late 2019 Samarth sold a cow, borrowed a large sum interest-free from a bus owner with whom he had done business, and in February made a down-payment of BDT100,000 to a Dhaka-based consultancy to procure the son a Canadian student visa. Two weeks later, a bank savings plan matured, he sold much of the family’s gold jewellery and borrowed heavily but interest-free from a nephew who had an office job. On 1 March Samarth paid the consultancy a further BDT300,000. Then the pandemic struck, and the visa-processing ground to a halt.

Samarth assured us that the agent was reliable and that all would be well. But in the project’s monthly surveys, where we ask each diarist how things have been that month, Samarth was gloomy, especially during the July and August monsoon, when his grazing land and vegetable plots were under water. The family did not go hungry because they could consume their own produce.

As Fig. 6 shows, the big transactions related to his son’s visa dominated Samarth’s accounts in 2020. After a frantic start to the year, things went ominously quiet in the second half of 2020, with income flows from produce sales drying up in the post-pandemic period.

Samarth’s case shows how individual diarists responded to the pandemic in ingenious ways—in Samarth’s case, transforming himself from a small farmer to a trader overnight when he spotted an opportunity during the lockdown. However, the profit-making opportunity was short-lived, and Samarth’s income all but disappeared in the later part of our study period.
4.5. Case study 5: Shobhona, a breaker of bricks

Shobhona, now in her mid-30s, is another of our very poor diarists, but a supportive family, public welfare payments, and a habit of keeping cash reserves at home helped her to survive the lockdown. Her situation is unusual, as she is the breadwinner for her widowed younger sister and the sister’s two children, both in primary school. The four of them live in a hut in the homestead of Shobhona’s late brother-in-law. The hut was built as a weekly meeting place for a Grameen Bank borrowers’ group, but the group is a male one, and male attendance at MFI meetings these days is sparse, so no one finds it inconvenient.

Shobhona breaks bricks for a living. Bricks are broken in Bangladesh to provide aggregate for concrete in a country that lacks stone. She goes to building sites to squat on the ground with a hammer and a thick leather glove and smashes the bricks into small pieces, on a self-employed basis paid by quantity. On average this brings in BDT4,000 each month, but she often gets paid in arrears. There is no other earned income, but the sister is partially blind and receives a government disability allowance of BDT700 a month, paid half-yearly. The household has no MFI accounts, but Shobhona, thinking of her niece’s eventual marriage, has signed up for a ten-year commitment savings account, at BDT7,000 a year, with an insurance company. They occasionally borrow interest-free from neighbours and relatives, and keep a little money with ‘money guards’—older family members who can be trusted to keep money safe for them. Shobhona also keeps cash reserves at home: in May 2020, for example, she had more than BDT12,000 hidden away, about three times her monthly income. Despite being entirely without schooling, Shobhona is shrewd and thoughtful about money matters.

The two women have older siblings and receive both affection and financial help from them. Their brother is a dried-fish seller living nearby, and he gives them a little cash almost every day to ensure that the children get milk regularly. As the children have grown, he has gradually increased the amount, from BDT5 to BDT10, then to BDT20 and sometimes BDT50 a day. An older sister, who is married and lives a little way off, gives regularly although less frequently. Several neighbours also occasionally give cash. Shobhona is liked and respected in the neighbourhood.

In April this year, just after the lockdown started, Shobhona contracted typhoid. She spent money on tests and medicine. She could hardly have chosen a worse time to fall ill, but her circumstances meant that her household survived the lockdown better than most. As Fig. 7 shows, disability grants helped: in the first quarter of the year they made a surplus, and the second payment came just as they were trying to recover from a workless April. Shobhona’s sickness then drew generous support from her relatives. Shobhona went back to work as soon as she was able.

Shobhona’s case is an example of how government disability payments combined with gifts received from relatives—an informal insurance mechanism—can provide an important safety net for the poor during a period of economic crisis. It also illustrates that uneducated people can be good at managing money.

The five case studies illustrate the varied experiences of the diarists during the pandemic. In all five cases, large income losses, along with the uncertainty regarding how long the pandemic would last, led to significant financial hardship and heightened anxieties about the future. In all these cases, incomes and financial inflows remained below pre-pandemic levels several months after lockdown was lifted. The cases also show that the pandemic exacerbated existing economic vulnerabilities for the poor in Hrishipara, who had precarious livelihoods from before the onset of the pandemic.

5. The impact of the pandemic on livelihoods of the poor in Hrishipara

In this section, we examine the impact of the pandemic on household incomes, expenditures, and financial transactions until September 2020, differentiating between pre-lockdown, lockdown, and post-lockdown periods. We first discuss the data we use in our empirical analysis. We next examine the behaviour of incomes, expenditures, and financial flows over the course of the pandemic using the data.

5.1. Data

We use daily data on incomes, expenditures, business costs, loans taken and repaid, savings deposits and withdrawals, gifts
received and given, and overseas remittances received. The list of variables, along with short descriptions used in the empirical analysis, is provided in Table 2. The data begin on 1 October 2019 and end on 30 September 2020. We note that the official lockdown period was from 26 March to 31 May 2020. However, as discussed previously, the lockdown was strictly enforced from 26 March to 30 April 2020, and weakly enforced from 1 to 30 May 2020. Therefore, we split the lockdown period to two subperiods: ‘strict lockdown’ (26 March to 30 April) and ‘weak lockdown’ (1 to 30 May). The post-lockdown period also had two clear subperiods: the ‘post-lockdown 1’ (1 June to 30 September) and the subsequent subperiod from 1 August 2020 to 30 September, which we denote by ‘post-lockdown 2’. As large asset sales by one diarist can significantly affect the average values for all diarists, and tend to occur very infrequently, we drop them from the sample. Specifically, we drop all asset sales greater than or equal to BDT30,000 (approximately US$950 at 2019 purchasing power parity exchange rates according to the World Bank’s World Development Indicators). The total number of transactions for the 60 diarists in our data-set for the period of analysis is around 150,000.

5.2. The behaviour of incomes, expenditures and financial flows

We begin with plots of incomes, expenditures, business costs, loans borrowed and repaid, savings deposits and withdrawals, gifts received and given, and overseas remittances received. All graphs use 14-day centred moving averages, and we deflate the nominal values by the relevant monthly consumer price index (CPI) for rural areas, obtained from the Bangladesh Bureau of Statistics. Total real inflows and total real outflows for all 60 diarists track each other closely over time, and show a clear decline during the first month of the lockdown period (strict lockdown) (Fig. 8). They show some recovery in the second month of the lockdown period (weak lockdown), carrying on into the first two months of the post-lockdown period (post-lockdown 1). Interestingly, this recovery is not sustained as we move into the final two months of our period of analysis—August and September 2020 (post-lockdown 2).

We see very similar patterns for gross income, business costs (costs), household expenditures (expenditures), and net income (Fig. 9). Incomes, costs, and expenditures fall in the first month of the lockdown period, and recover somewhat in the second month of the lockdown period. A stronger recovery is seen in the first two months of the post-lockdown period, but this recovery is not sustained in August and September 2020. We see that gross income shows stronger recovery than business costs in the second month of the lockdown period, which is reflected in a strong recovery in net income in May 2020.

We now look at savings deposits and withdrawals, gifts received and given, loan repayments and borrowings, and overseas remittances. It is striking to see the near-shutdown in financial transactions during the lockdown period, with very limited savings

![Figure 8. Daily means of total inflows and outflows, 14-day centred moving average.](image-url)

Note: vertical lines mark start and end of lockdown. Nominal values deflated with monthly CPI. Dashed horizontal lines indicate period averages. Source: authors’ illustration based on data from HDDP.
We find that the average values of all variables are significantly lower in the strict lockdown period compared with the pre-lockdown period. For example, total real inflows are 68 per cent less in the strict lockdown period compared with the pre-lockdown period, and total real outflows are 63 per cent less in the strict lockdown period compared with the pre-lockdown period. Real net income and real expenditures are 69 per cent and 38 per cent less in the strict lockdown period compared with the pre-lockdown period. These are dramatic declines in household incomes, expenditures, and financial transactions within the short window of a month. However, while household incomes, expenditures, and financial flows remain depressed during the weak lockdown period, the rate of decline is not as pronounced as in the earlier period. For example, total real inflows and outflows are respectively 47 and 48 per cent less in weak lockdown compared with pre-lockdown. Interestingly, real net income is 16 per cent higher in weak lockdown compared with pre-lockdown, driven mostly by a recovery in gross real income without a corresponding increase in business costs. Real expenditures also show a swift recovery, being only 11 per cent lower than the pre-lockdown level. After the lockdown is lifted, economic activity continues to recover. Nonetheless, in the first two months after the lockdown (post-lockdown 1), total inflows, outflows, and most financial transactions remain below pre-lockdown levels. However, income, expenditures, and overseas remittances exceed the pre-lockdown averages, which is in large part explained by the Eid al-Adha-related resumption of economic activity. In the second half of the post-lockdown period (post-lockdown 2), starting just after Eid al-Adha, incomes and expenditures decrease from the first part of the lockdown, and the averages of all the variables remain below pre-lockdown levels. By this time, at least two months have elapsed since the official lockdown was lifted. In part, weak economic activity can be explained by the fact that the markets had not recovered their normal functioning by August and September 2020, and also by the fact that people remained fearful of COVID-19 during the summer and early autumn, limiting their mobility and their willingness to seek work.

As we noted previously, the onset of the festive season related to Eid al-Adha clearly led to a resumption of economic activity to some degree. However, this recovery in economic activity was not sustained, and household incomes and financial inflows did not pick up momentum over time, with the result that incomes, expenditures, and financial transactions were still below pre-pandemic levels four months after lockdown was lifted. Similarly to our findings for the lockdown period, household expenditures did not adjust downwards as much as incomes in the post-lockdown period.\(^6\)

In the Appendix A4, we report the results of an econometric analysis of the impact of the lockdown on incomes, expenditures and financial flows. In line with our findings from the summary statistics, we find that lockdown had a clear negative impact on incomes, expenditures, total inflows and total outflows, both during the strict and weak lockdown sub-periods. We also find that the strict lockdown period had a more pronounced negative impact on the diarists’ economic activity than the weak lockdown period, and the effect of the lockdown was more muted on expenditures than on incomes.

How pronounced was the downturn in economic activity in the 2020 festive period compared with the 2019 festive period? Table A2, with the summary statistics for the other variables presented in Table A3.

\(^6\) Our finding that the lockdown had a stronger negative effect on income than on expenditures is similar to Janssens et al. (2021) who use data from financial diaries for low income households in rural Kenya. Gupta et al. (2021b) obtain a similar finding using a large scale consumer survey for India.
According to the Islamic lunar calendar, the first of the two religious holidays, Eid al-Fitr, is at the end of Ramadan; the second religious holiday, Eid al-Adha, falls on the tenth day of Dhu al-Hijjah. In the international calendar, the dates vary from year to year. In order to compare like for like, we examine the difference in the behaviour of total inflows and outflows and net incomes and expenditures (Fig. 11) from 30 days before the timing of Eid al-Fitr to 100 days afterwards in 2020 compared with 2019. We observe that total inflows, total outflows, incomes, and expenditures were all significantly lower in 2020 compared with 2019 during the festive season (the differences between the years are all negative, especially just after lockdown), with the decline in expenditures less pronounced than the declines in total inflows, total outflows, and net incomes. The differences in the levels of financial flows, incomes, and expenditures between 2020 and 2019 are not as large after the Eid al-Adha religious holiday, although they remain negative. This suggests that while economic activity recovered some ground after Eid al-Adha in 2020, it was not a complete return to normalcy.

To rule out possibility that the differences between 2020 and 2019 are due exceptionally high inflows and outflows in 2019, Fig. A3 in Appendix A3 show differences between 2020 and daily averages of 2019 and 2018. Here drop in the transaction values is even larger than with the 2019 data only.

Fig. 11. Total real inflows, total real outflows, income, and expenditures: differences between 2020 and 2019 around Eid al-Fitr and Eid al-Adha, 14-day centred moving average. Note: Eid al-Fitr and Eid al-Adha on solid lines, lockdown lift on dashed line. Dashed horizontal lines indicate period averages. Source: authors’ illustration based on data from HDDP.

20 Twenty four of the sixty diarist households are Hindu and therefore do not celebrate Eid. Nevertheless, the Eid festivals impact the economy and lives of both religious communities. For example, Hindu shopkeepers enjoy increased sales, and low-caste Hindus in the Hrishipara settlement can earn money from jobs such as processing the hides of the sacrificial beasts.
levels, even by the end of August 2020. The cash reserves for all 60 diarists did not return to pre-lockdown levels, even by the end of August 2020. It is evident that cash reserves were being drawn down on for the entire lockdown period as well as the first part of the post-lockdown period (Fig. 12). However, the cash reserves for all 60 diarists did not return to pre-lockdown levels, even by the end of August 2020.

6. How did households cope during the pandemic?

The COVID-19 pandemic and associated government lockdown measures led to a sharp fall in household incomes, as we observed in the previous section. In this section, we discuss the different coping mechanisms that our diarists used in the face of a large unanticipated negative shock to their incomes.

6.1. Drawing down on cash reserves

As we have seen in the previous section, expenditures did not fall as much as incomes in the lockdown period, indicating that households could find ways to smoothen expenditures in spite of the sharp unanticipated decline in incomes. Yet, as we described in Section 2, there was very limited possibility for our diarists to use the standard coping mechanisms that poor households use when faced with a generalized cessation of economic activity. With the closure of the MFIs where households held most of their savings, households could not borrow or draw down on their savings accounts. With the restrictions on mobility during lockdown, they could not visit friends and relatives or be visited by them, so they could not rely on the exchange of gifts, which is often customary in traditional societies as a way of coping with adversity. So how did the households manage to smoothen their expenditures in the face of income losses?

One important coping mechanism was to draw down on the cash balances that diarists kept at home, in order to finance critical non-food expenditures, household non-food expenditures while trying to maintain expenditures on food. As is clear from Fig. 13, while the level of spending on food generally remained stable for the 60 diarists, there was a sharp reduction in recurrent household expenditures in the first month of lockdown (April 2020), and the level of recurrent expenditures never returned to pre-pandemic levels even when lockdown was lifted on 1 June 2020 (we see a spike in food expenditures in the festival month of July 2020). Interestingly, the real expenditures on food were maintained even with the increase in the retail price of rice (the most important food grain in Bangladesh) from BDT40 per kilo in March to BDT45 in April and a high of BDT53 in May 2020, thanks to disruptions in supply chains due to the pandemic and lockdown policies.

6.2. Conserving expenditures on food

A second coping mechanism was to reduce the outlays on recurrent household non-food expenditures while trying to maintain expenditures on food. As is clear from Fig. 13, while the level of spending on food generally remained stable for the 60 diarists, there was a sharp reduction in recurrent household expenditures in the first month of lockdown (April 2020), and the level of recurrent expenditures never returned to pre-pandemic levels even when lockdown was lifted on 1 June 2020 (we see a spike in food expenditures in the festival month of July 2020). Interestingly, the real expenditures on food were maintained even with the increase in the retail price of rice (the most important food grain in Bangladesh) from BDT40 per kilo in March to BDT45 in April and a high of BDT53 in May 2020, thanks to disruptions in supply chains due to the pandemic and lockdown policies.

7. Conclusions

This paper has examined the impact of the COVID-19 pandemic on the incomes, expenditures, and financial flows of 60 poor and very poor households in a semi-rural setting in a low-income country. We used a novel high-frequency daily data set that follows 60 households in Hrishipara in Bangladesh as part of the HDDP over one year, covering the pre-pandemic and pandemic periods. We used detailed transactions data on incomes, expenditures, loans, savings, gifts received and given, and remittances, as well as life-history interviews and regular and one-off surveys with the diarists, to analyse the impact of the pandemic on the 60 diarists’ livelihoods how the diarists coped with the economic and financial implications of the pandemic.

We first documented the behavioural responses of the poor during the pandemic through case studies of five diarists. We showed that the common feature of the case studies was the large income losses during lockdown; incomes remained below pre-pandemic levels several months after lockdown had been lifted. The case studies also highlighted the different coping strategies followed by the diarists, ranging from selling livestock to starting a new business, receiving gifts from family, cutting back on food expenditures, and being reliant on limited government support.

In our empirical analysis, we found that there was a large negative effect of government lockdown policies on the 60 diarists’ financial inflows, outflows, incomes, and expenditures. The decline in financial transactions, incomes, and expenditures was the most pronounced in the initial month of lockdown (April 2020), when the government strictly enforced mobility restrictions and workplace closures. In the second month of lockdown as well as the post-lockdown months, financial flows, incomes, and expenditures remained depressed, but not as much as in the initial month of lockdown. Interestingly, we found that while there was some recovery in financial transactions, incomes, and expenditures in...
first two months of the post-lockdown period, there was a further
decline in incomes and expenditures in the last two months of the
period of our analysis—August and September 2020. This suggests
that the negative effect of the pandemic on the poor in our study
area went far beyond the immediate lockdown period and may
be long-lasting. As Bangladesh entered another national lockdown
on 1 July 2021, following a period of rising COVID-19 infections,
clearly the effects of the lockdown on livelihoods of low-income
Bangladeshis may be felt well into 2021. 12

We also found large declines during the lockdown period in
borrowing, savings withdrawals, and the receipt of monetary gifts
from friends and family. Unable to engage in conventional coping
strategies due to the cessation of financial activity, households
engaged in extreme coping mechanisms such as running down
cash balances at home and cutting back on non-food expenditures
so as to maintain critical expenditures on food. Our case studies
also illustrated the varied experiences of individual diarists during
the pandemic.

Our study makes clear the very unusual circumstances in which
the poor found themselves during the COVID-19 pandemic. Not
only did all economic activity stop for over a month, but the nor-
mal coping mechanisms that rural households use when faced
with unexpected negative shocks to income—such as liquidating
savings deposits, or borrowing from MFIs and friends and fam-
ily—were not possible, due to the closure of MFIs and the restric-
tions on mobility. This also suggests the importance of
government safety nets that are accessible to all households and
not just a few. There was relatively little evidence of such universal
safety nets in our study area (see also Ali, Hassan, & Hossain, 2021).
The main reason why the poor in Hrishipara managed to survive
the pandemic period was that they used their most precious
resource—cash at home—as well as cutting back on any consump-
tion items that it was possible to forego, maintaining critical
expenditures on food to ensure survival. A clear policy implication
of our study is the urgent need for the state to be prepared for
large-scale unconditional cash transfers when catastrophic events
such as pandemics occur, disbursed directly to the poor with min-
imal paperwork.

CRediT authorship contribution statement

Risto Rönkkö: Data curation, Formal analysis, Writing - review
& editing, Visualization. Stuart Rutherford: Conceptualization,
Investigation, Data curation, Writing - original draft. Kunal Sen:
Conceptualization, Methodology, Formal analysis, Writing - origi-
nal draft.

Declaration of Competing Interest

The authors declare that they have no known competing finan-
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Appendix A. Supplementary data

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