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# Beyond India's Lockdown: PMGKY Benefits During the COVID-19 Crisis and the State of Digital Payments

**Alan Gelb, Anurodh Giri, Anit Mukherjee, Ritesh Rautela, Mitul Thapliyal, and Brian Webster**

## Abstract

India imposed a lock-down in response to the COVID-19 pandemic in March 2020 and began a gradual re-opening in June. A telephonic survey in April examined the early effectiveness of information and the massive PMGKY social protection program (Policy Paper 217). This paper analyzes a second-round survey, conducted six months later. Logistical and information constraints had relaxed, and incomes and jobs had begun to stabilize for some. There were not strong indications of differential access to benefits by income or location, but constraints to providing public employment had tightened in the face of increased demand, resulting in greater job rationing. Men made more use of digital channels, with a clear smartphone ownership hierarchy between men and women; this divide carried over into the growing autonomous use of digital payments which is conditioned on access to smartphones. Survey results confirm strong local agglomeration effects in digital payments, mirroring the general pattern with higher use in states hosting India's major technology hubs. At the same time, trust-based concerns reduced the use of assisted digital cash-outs through agents.

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## Summary

India imposed a lock-down in response to the COVID-19 pandemic in March of 2020 and began a gradual re-opening in June of that year. During the initial phase of the crisis, MSC conducted a telephonic survey in April examining the effectiveness of programs to inform the public and distribute cash and in-kind social protection benefits. Millions of households benefited from the cushioning effect of the massive relief program targeted at the poor, the Pradhan Mantri Garib Kalyan Yojana or PMGKY. At the same time, access to benefits was curtailed for some, due to a combination of logistical and information constraints. This paper analyzes a second-round survey, conducted six months later after the economy had partially re-opened.

Both logistical and information constraints had relaxed considerably, and incomes and jobs had begun to stabilize or rebound, but only for some. In line with the results of the first-round survey, there were not strong indications of differential access to benefits by income or location. After a pause during the lockdown, biometric authentication for food rations had resumed, with little indication that this posed a serious exclusion risk. But at the same time, administrative and financial constraints to providing public employment had tightened in the face of increased demand for jobs, resulting in greater job rationing.

The second-round survey throws more light on gender differences in access to digital information and payments and the use of communication channels. Women are relatively more likely to rely on personal contacts to access information than men, who made more use of digital channels. There is a clear smartphone ownership hierarchy between men and women; if a household owns only one smartphone, an overwhelming majority of the time it is owned by a man. This hierarchy carries over into the autonomous use of digital payments which is heavily conditioned on access to smartphones.

Survey results also confirm strong local agglomeration effects in digital payments as the smartphone payments ecosystem based on QR codes and Universal Payments Interface (UPI) is rolled out. Even as many beneficiaries cannot read or write SMS messages, a rising proportion of beneficiary households use these platforms. This mirrors the general pattern across the country, with higher use in states hosting India's major technology hubs. At the same time, trust-based concerns caused assisted digital cash-outs through agents to decrease as beneficiaries reverted to banks as a preferred cash-out point for benefits.

## 1. Introduction

India's Covid-19 experience continues to be exceptional, both in the human toll the disaster has taken, and in the scale of the country's response. As of March 21, 2022, India has officially lost 516,510 people to COVID-19, the third most of any country globally, behind only the United States and Brazil.[1] It has been estimated, however, that over ten times that

[1] https://ourworldindata.org/covid-deaths

many Indians may have died due to the pandemic, and potentially as many as 9.8 million (Anand et al. 2021; The Economist 2021).

Those losses have come despite a national lockdown accompanied by one of the world's largest social protection responses, the Pradhan Mantri Garib Kalyan Yojana, or PMGKY program. This increased benefits in multiple ongoing programs and included a new cash transfer program to women, the PMJDY, which alone covered 206 million people, a number rivaled only by the first round of stimulus checks in the United States (Gentilini et al. 2020).

The early implementation of this program was assessed using a phone survey, administered by Microsave Consulting (MSC) to over 5,000 individuals across the country, starting in April 2020 and extending over two weeks. Previous research found that PMGKY had successfully provided support to hundreds of millions of people, but that information and logistical challenges created barriers to the full realization of benefits (Gelb et al. 2021). Evidence of logistical barriers was unsurprising given that responses were collected in the midst of India's initial lockdown, which began on March 24th, 2020, and was eventually extended through May (Soni 2021). During that time, businesses deemed non-essential, including air and rail travel, educational institutions, entertainment venues, and most retail operations, were closed.[2] By late April, workplace attendance and public transportation use had declined by roughly 60 percent, and retail site volume by 80 percent (Ritchie et al. 2020). Among the most perverse effects of a lockdown intended to reduce human interactions was a massive wave of internal reverse-migration. Faced with the loss of their livelihoods, millions of urban migrant workers traveled back to their home villages where access to government relief was more likely, many walking hundreds of kilometers in the process (Mukherjee 2020).

Conditions began to ease as the Government initiated a gradual unlocking of the economy between June 1st and July 31st, 2020. Many activities remained halted, but restrictions were relaxed on some transportation and educational services, and exceptions extended to an imposed curfew (Business Standard 2020). By the end of July, workplace and public transportation use had recovered roughly half of their decline in volume, a process that would continue until spring of 2021.

It was under these more relaxed circumstances that MSC conducted a follow-up survey to revisit the efficacy of the implementation of the PMGKY benefits package. This paper analyzes results from the second-round survey, comparing them to the first to understand how the pattern of constraints shifted during the pandemic. We first describe the second-round survey, together with the profile of job and employment loss and partial recovery through the lockdown and its easing. We then comment on major programs within PMGKY: the in-kind Public Distribution System (PDS), the direct benefit financial transfer (DBT) programs together with similar social protection payments, and workfare under the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) which is constitutionally bound to offer a minimum level of employment to those seeking it. The surveys also throw light on beneficiary

[2] https://economictimes.indiatimes.com/news/india/one-year-since-a-complete-lockdown-was-announced-we-look-back-on-how-india-fought-covid/first-lockdown-announced/slideshow/81662838.cms

payments choices, patterns of smartphone ownership and the use of digital payments by beneficiary households. The conclusion summarizes the findings and their implications.

## 2. Survey design and data collection

MSC's second-round survey was conducted during August and September of 2020. Much like the initial study, this survey was administered by phone across 18 states to 5,081 respondents, 80 percent of whom participated in the first-round survey.

All respondents were (a) members of Priority Households (PHH) or Antodyaya Anna Yojana (AAY) beneficiaries (food insecure and extreme poor respectively) under the PDS, and (b) benefitted from at least one Direct Benefit Transfer (DBT) program administered by the Government of India.[3] Most respondents were male (70 percent male, 30 percent female), held PHH ration cards (80 percent PHH and 20 percent AAY, generally taken to represent the poorest group), and lived in rural communities (69 percent rural, 31 percent urban).

As this was a phone survey, all participants had access to a phone; in fact, 71 percent lived in a household in which at least one member possessed a smartphone. This reflected India's recent surge in smartphone ownership as well as access to cheap mobile data plans.[4] Yet, in contrast to the high rate of mobile and smartphone penetration, 35 percent of respondents were unable to read SMS messages, and 58 percent were unable to write them. Table 1 provides a summary of the sample demographics for both surveys. All results referenced in this paper are unweighted.

**Table 1. Summary statistics**

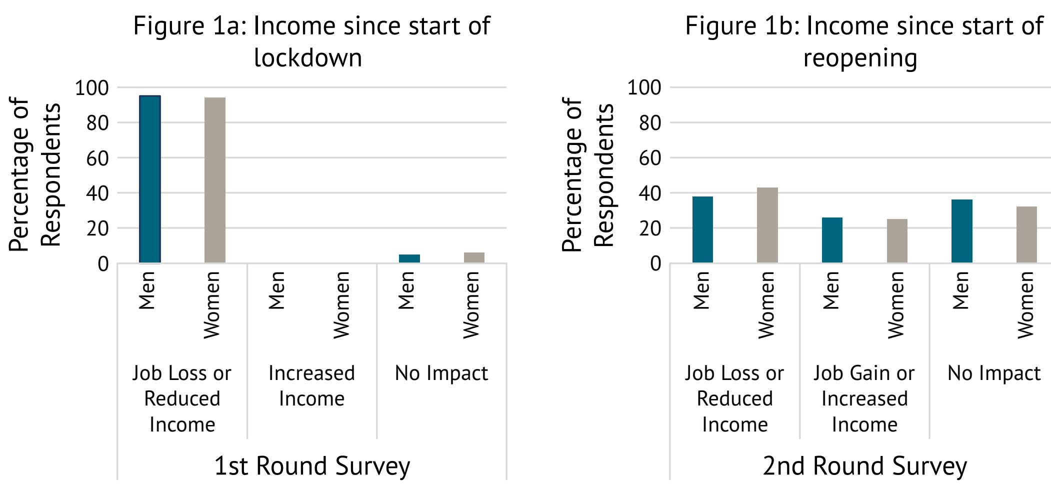
| Demographic Category | Number of 1st Round Respondents | Percentage of 1st Round Respondents | Number of 2nd Round Respondents | Percentage of 2nd Round Respondents |
|---|---|---|---|---|
| All Respondents | 5,082 | 100 | 5,081 | 100.0 |
| Male | 3,537 | 69.6 | 3,569 | 70.2 |
| Female | 1,545 | 30.4 | 1,512 | 29.8 |
| Urban | 1,598 | 31.4 | 1,586 | 31.2 |
| Rural | 3,484 | 68.6 | 3,495 | 68.8 |
| Holds PHH ration card | 3,907 | 76.9 | 4,054 | 79.8 |
| Holds AAY ration card | 1,175 | 23.1 | 1,027 | 20.2 |
| Household has at least 1 Smartphone | 3,686 | 72.5 | 3,607 | 71.0 |
| Household lacks a Smartphone | 1,396 | 27.5 | 1,474 | 29.0 |
| Households Has at Least 1 Feature Phone | 4,237 | 83.4 | 4,420 | 87.0 |
| Household Lacks a Feature Phone | 845 | 16.6 | 661 | 13.0 |
| Household Has at Least 1 Bank Account | 5,073 | 99.8 | 5,081 | 100.0 |
| Household Lacks a Bank Account | 9 | 0.2 | 0 | 0.0 |

[3] The surveys are of implementation rather than inclusion in these benefit programs; the sample does not cover people who may have been excluded for various reasons.

[4] https://economictimes.indiatimes.com/industry/telecom/telecom-news/indian-to-have-820-million-smartphone-users-by-2022/articleshow/76876369.cms?from=mdr

Incomes and employment were hard-hit by the lockdown. In the first-round survey, 95 percent of respondents reported experiencing either income or job loss relative to pre-lockdown levels with none indicating gains. The second-round data suggest persistent deterioration but the beginnings of a partial recovery. Relative to May 2020, 41 percent indicated further income or job loss, but 26 percent indicated an improvement. As shown in Figure 1, this result was true for both male and female income earners generally, with 43 percent of women reporting further erosion, and 25 percent income gains. The second-round survey, however, indicates worse economic outcomes for respondents who were members of households in which a woman was the chief earner. Forty five percent of such people reported further income or job loss and 16 percent improvement, as compared to 39 percent and 26 percent respectively of respondents from households with a male primary breadwinner. This finding is in line with other studies that suggest that women have been disproportionately impacted by the economic fallout of the pandemic (Koshy and Sanchez 2021).

**Figure 1. Impact of COVID-19 lockdown on income and jobs, by gender**




## 3. In-kind rations: performance of PDS

Covering over half of all Indians, the PDS is responsible for safeguarding the nutritional security of relatively low-income people. Those with PHH or AAY ration cards receive subsidized foodgrains under the National Food Security Act (NFSA), and of these two groups those with AAY cards are poorer. Under the PMGKY relief measure, holders of PHH and AAY ration cards were entitled to extra allocations of food grains, free of cost, in addition to their normal allotments. Initially, the free ration was for a period of three months beginning in April of 2020 (Government of India 2021). The measure was extended four times, however, until March of 2022 (Government of India 2021).

The first-round survey conducted early in the pandemic indicated that the PDS was functioning well, with 91 percent of those surveyed receiving food during that time, a remarkable achievement given the restrictions imposed by lockdown and the scale of the distribution effort (Gelb et al. 2021). Nevertheless, there were signs of rationing, with some reporting not having received their normal allocation or the extra allocation provided under PMGKY.[5] Supply chain constraints were the main cause; among the nine percent who reported receiving nothing, the two most common reasons cited were that rations had not been delivered (33.1 percent) and that dealers had denied service (14.8 percent). The second-round survey suggests that some improvement occurred, with almost 94 percent reporting that they had received rations, but also that logistical difficulties persisted. Non-delivery of rations and denial of service by agents remained the two most likely reasons to be given for failure to receive any benefit (45.7 percent and 25.5 percent respectively).

Disparities in distribution noted in the first-round survey also appear to have been lessened, but not eliminated. The gap between those with PHH ration cards and those with AAY ration cards in receiving something from the PDS shrank by nearly half (from 8 percent to 4 percent); and AAY beneficiaries were actually 5 percent more likely to report receiving both normal and additional rations.[6] Biometric authentication of recipients, which had been suspended for more than half of the respondents, was largely restored by the time of the second-round survey. Again, authentication failure was not mentioned as a major factor in failure to receive benefits; with this being noted by 0.31 percent of recipients.[7]

## 4. DBT cash transfer programs: use of digital payment systems and information channels

The DBT payment mechanism serves over 300 programs and schemes, some of which were scaled up as part of PMGKY. The COVID-19 relief package included two programs—both targeted at women beneficiaries—that relied on direct financial transfers. The first involved three monthly payments to women holders of Prime Minister's Jan Dhan Yojana (PMJDY) accounts, which were opened from 2014 onwards to promote financial inclusion by offering basic Aadhaar and debit card linked bank accounts. The second established a complex system of advances to Pradhan Mantri Ujjwala Yojana (PMUY) beneficiaries to purchase cooking-gas cylinders during the period of COVID-related disruption.

The first-round survey indicated that India's DBT system struggled to communicate with beneficiaries and to distribute transfers during the initial lockdown. All the respondents were enrolled in at least one transfer program that utilized DBT, yet only 76 percent reported being aware that a payment had been made in their account. Of those, 77 percent were able

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[5] As noted for the first-round telephone survey it was not clear whether respondents could accurately distinguish the extra supplement from their normal rations. Beneficiaries were not required to pay for the extra rations so some may have received them without realizing. States and districts also adopted different timelines for distributing the supplement.

[6] Statistically significant at the 95 percent level.

[7] The rate of biometric authentication failure would probably have been higher than this since backup protocols are supposed to be used to authenticate in other ways, as previously found for Andhra Pradesh (Aadil et al. 2019).

to access the payment, meaning that only 59 percent of the sample actually realized at least one of their cash benefits in the immediate aftermath of the lockdown.

Beneficiaries who received transfers generally learned of them through an SMS text message from their bank (52 percent), although many discovered it during a bank visit (26 percent) or through the experience of neighbors (25 percent). For those who received a transfer and successfully went to a point to cash out, the generally preferred methods were via bank branch (54 percent), ATM (18 percent), or mobile agents (13 percent). Crowding of cash-out facilities (38%) and transportation difficulties (35%) were often reported as obstacles. The most frequently cited reason for not withdrawing funds was inability to reach a cash-out point.

As beneficiaries of a new program, PMJDY account holders faced similar information issues but to a greater degree. Only 68 percent of those eligible reported receiving a transfer in their account. By comparison the (ongoing) pension programs covered in the first-round survey had an average recognition rate of 81 percent. Those PMJDY beneficiaries who were aware of receiving a transfer had a very similar cash-out experience to other DBT users. For those unable to access the funds, 62 percent cited inability to reach a cash-out location.

The second-round survey showed a marked improvement in the distribution of cash benefits through DBT. Over 89 percent of all respondents reported being aware of receiving at least one transfer, a 13 percent increase from the first-round survey. PMJDY account holders saw an even more dramatic improvement to 89 percent, a jump of 21 percent. Once a transfer was learned of, 92 percent of all DBT beneficiaries were able to cash-out. Interestingly, the second-round survey showed that male and female respondents were equally likely to report learning of and accessing transfers, whereas in the first-round women were more likely to do so (5 percent and 3 percent respectively).

Eased logistical constraints due to the loosening of lockdown restrictions were partially responsible for this improvement, although difficulties remained. For those who successfully retrieved their funds, reports of transportation barriers declined slightly and for those who did not, only 3 percent reported being unable to reach a cash-out point. Banks and ATMs remained the preferred cash-out point and the increased traffic at these sites appears to have been an issue. Half of those who successfully retrieved funds reported crowding and long lines being a problem, an increase from the first-round survey. The most frequent reason given for not successfully cashing-out was fear of contracting COVID-19.

## 4.1 Use of digital payment systems

One factor in crowding at bank branches was a retreat from the use of mobile agents. This fell from 13 percent of beneficiaries who went to any cash-out point in May to only 9 percent in September.[8] The pull-back from assisted digital banking through agents is confirmed by the changes in Aadhaar-enabled Payment Services from the National Payments Corporation of India (NPCI). Running at around 200 million per month before the lockdown, these agent-based transactions soared to over 400 million per month during the initial phase of the pandemic, only to fall back to under 300 million as the lockdown eased (NPCI, 2020–2021). Even as banks pressed customers to use agents for small transactions, many preferred to return to their banks to cash out benefits, citing lack of trust in agents, fees, and concern about loss of confidentiality, including when agents, who are often members of local communities, were asked to check account balances.[9]

This retreat from assisted digital banking contrasts with the growing autonomous use of digital payments, mostly through interfaces such as Google Pay, PhonePe and PayTM. The first-round survey found that 12 percent of individual respondents reported that they used such platforms frequently. The second-round survey probed household use more broadly, finding that that almost 20 percent of respondents, or another member of their family, used digital payment platforms on a somewhat frequent basis, including to pay utilities and other bills, as well as to make person-to-person transfers.

In both surveys, the use of digital payments was highly localized, indicating the importance of agglomeration effects as payment ecosystems reach critical mass in local economies. Although the state-level samples may not be representative of their states as a whole, by far the highest family-based use was reported in Karnataka (86 percent, up from 43 percent for individual use reported in the first-round survey) and Telangana (51 percent, up from 26 percent); these states are home to India's largest tech hubs. In contrast, the samples in Uttar Pradesh and Haryana reported family-based use at only 4 and 5 percent respectively. The sample from Bihar, the poorest state in India, registered 15 percent for family-based usage, possibly because the state is home to large numbers of internal migrants, many of whom would have been previously communicating with their families and sending remittances.[10] These patterns largely mirror wider indicators of the spread of digital payments from provider surveys.[11]

Another factor leading to differentiated use patterns is gender differences in access to smartphones, which is strongly associated with the use of digital payments. With increasing access to smartphones and cheap mobile data, India's digital payments ecosystem has largely bypassed USSD-based transactions.[12] The second-round survey indicates that smartphone

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[8] In addition, 2 percent of respondents to each survey reported cashing out through agents who had made home visits.

[9] Fees were also cited as a major concern regarding agents in the first-round survey (Gelb et al. 2021). In contrast, neither survey indicated biometric authentication failure as a major factor preventing transactions and discouraging the use of agents.

[10] Among the states specified here, Bihar also had the lowest rate of realizing cash benefits. Of those who intended to access available transfers, 87 percent in Bihar were successful, as opposed to at least 99 percent in the others.

[11] Detailed surveys released by PhonePe, one of the largest provider of digital payments, show a similar pattern of concentration across localities, with a comparable difference in the ratio of payments to population of around 10 to 1 between localities: https://www.phonepe.com/pulse/

[12] See Cook and Raman (2019) on the evolution of digital payments architecture in India.

ownership follows a powerful hierarchy. If a household only owns one smartphone, 87 percent of the time it is possessed by a man: it is very rare for the sole household smartphone to be owned by a woman. If a household acquires a second smartphone, it is usually held by a woman, but the majority of subsequent smartphones are then owned by men. Overall, only 16 percent of respondents claimed that at least one woman in their household owned a smartphone when a male member did not, whereas 40 percent claimed that at least one woman owned a smartphone if at least one man did as well (Table 2). Because of this hierarchy, overall smartphone ownership lags considerably among women.

This gap in access to smartphones partially explains why the use of digital payments by women has lagged that of men, but other factors appear to be at work as well. An examination of second-round survey households that possess only one smartphone shows that the gender of the owner has no statistically significant impact on the likelihood of digital payment use by the family. Within households in which the sole smartphone is owned by a woman, however, a man is still reported as being the primary user of digital payments in the family 56 percent of the time, as opposed to 88 percent in households in which a man owns the only smartphone. That men are still generally the main users of digital payments in a household, even when women hold the key conduit for conducting them, suggests that a gendered hierarchy of smartphone usage within households exists as well, complicating the relationship between smartphone access and the adoption of digital payments by women.

Overall, the second-round survey showed that men were 5 percent more likely than women to report that someone in the family used digital platforms, and the first-round survey demonstrated a comparable gender gap at the individual level. Other research by MSC suggests that the gender gap in digital payment use is in fact much larger, with many non-users citing lack of trust as a critical issue (Jain et al. 2021).

**Table 2. Household smartphone ownership by gender**

| Number of Household Males with Smartphones | Number of Household Females with Smartphones | | | |
|---|---|---|---|---|
| | 0 | 1 | More Than 1 | Household Totals by Male Ownership |
| 0 | 1,474 | 265 | 14 | 1,753 |
| 1 | 1,768 | 1,052 | 43 | 2,863 |
| More Than 1 | 218 | 194 | 53 | 465 |
| Household Totals by Female Ownership | 3,460 | 1,511 | 110 | Total Households: 5,081 |
| *3,851 household males have smartphones, of 12,648 total male household members | | | | |
| **1,751 household females have smartphones, of 12,568 total female household members | | | | |

*Source:* MSC Survey.

The increasing use of digital payments stands in sharp contrast to the 35 percent of beneficiaries who are unable to read SMS and the 58 percent who cannot write SMS messages. In fact, even among respondents who reported digital payment use within their households, 18 percent could not read SMS and 39 percent could not write SMS. This reflects heterogeneity among beneficiaries, as well as, perhaps, the greater ease of using icon-based payment apps on smartphones for many people who come from a culture of orality.[13]

Together, these results suggest that although it retains a bank-based financial system, parts of India are evolving rapidly towards digital payments as local network externalities spur the growth of payment ecosystems and that many PMJDY beneficiaries engage with these platforms as the ecosystems are rolled out. This result is consistent with recent data on the notable increase in digital payment volumes together with an apparent shrinkage in the cash-based informal economy (Shetty 2021).[14] However, some states are far less advanced than others in this area, and gender-based asymmetries, including in smartphone ownership, limit women's access to this mechanism of transacting. Digital banking agents, many of whom are women, may face an uncertain future as autonomous use of the new platforms supplant assisted payments.[15]

## 4.2 Access to information: use of digital channels

Better communication appears to have aided the improvement in DBT distribution following the removal of lockdown restrictions, but with information channels strongly impacted by gender. The first-round survey found that little outreach had occurred regarding the PMGKY relief package, and that beneficiaries who learned of transfers generally did so through SMS messages from their banks (52 percent of such respondents). In the second-round survey, 60 percent of respondents reported learning of a transfer through SMS messages from banks, an increase of 8 percent. Overall, five of the eight information channels questioned saw increases in this regard, with decreases recorded in two; panchayat officials and the experience of neighbors or relatives.[16]

While there was a decline in the percentage of people who reported learning of a transfer through the experience of personal contacts, this change was concentrated among men. In the first-round survey, men and women were equally likely to have relied on word-of mouth, but the second-round survey showed women respondents were 5 percent more likely than men to do so. In contrast, male respondents were 6 percent more likely than female respondents to report learning of transfers via text messages in the first-round survey, and

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[13] "Orality" refers to the modes of thinking, speaking and managing information in societies where technologies of literacy (especially writing and print) are unfamiliar to most people. Tests show that they may be able to perform complex financial calculations using coins and notes of different sizes and colors, yet not be able to decode a 4-digit numerical string (Hudson Matthews et al. 2017).

[14] See https://timesofindia.indiatimes.com/business/india-business/indias-informal-economy-more-than-halved/articleshow/87575336.cms?from=mdr. The survey results indicate similar increases in digital payments for respondents included in both survey rounds

[15] See Aadil et al. (2019) for a discussion on the motivation and impact of women business correspondents on the use of agent-based financial services.

[16] The second-round survey questioned if respondents had learned of transfers specifically through a bank SMS message, government SMS, banking app, visiting a bank, visiting a bank agent, through a neighbor or relative, USSD*99# communication, or Panchayat official.

7 percent in the second. This result reflects a larger gender divide in digital capabilities. In the second-round survey, men were almost 13 percent more likely than women to be able to read and write SMS messages.[17]

This differentiation in communication between women and men is particularly noteworthy among households with female owned PMJDY accounts. As mentioned, such accounts were eligible for transfers under PMGKY as a way of specifically aiding women. Yet, male respondents from such households were 8 percentage points more likely to learn of transfers via text message, whereas female respondents were 6 percent more likely to have learned through a neighbor or relative.

However, we find no evidence that this difference in communication channels resulted in women being excluded from ultimately receiving digital transfers, be they the PMJDY benefit or others. Yet, these results do suggest that women were more likely to rely on leveraging personal relationships, implying a greater degree of dependence on others and, perhaps, less individual empowerment from digital communication tools.

As part of the PMGKY, beneficiaries of the Pradhan Mantri Ujjwala Program (PMUY) received three free refills of LPG gas cylinders to mitigate the burden of purchasing cooking gas during the pandemic. First instituted in 2016, the PMUY was intended to promote the use of cleaner cooking fuel. It provided beneficiaries (all of whom were women) free registration for a new LPG connection as well as a subsidy for a compatible cookstove. Covering nearly 80 million women, the program has increased LPG penetration, especially in rural areas. Yet the high cost of replacement LPG cylinders has limited their use. The average PMUY beneficiary uses only three refills a year, much lower than the national average of seven. Moreover, 20 percent of beneficiaries did not use LPG gas despite having a connection (Giri and Aadil 2021).

The PMUY benefit under PMGKY mitigated these costs during the crisis, but its design was complex. First, an initial transfer for the purchase of an LPG cylinder was sent to the registered bank account of PMUY beneficiaries. Recipients were expected to withdraw the subsidy, book an LPG cylinder, and then purchase it from an agent at market price. Conditional on the purchase of the first refill, two more transfers were then provided, one pre-emptive transfer and one reimbursement for the purchase of the third cylinder. These enhanced benefits ceased in September of 2020 (Giri and Aadil 2021).

In turn, the complex structure of subsidy payments had a negative impact on awareness and understanding of the PMUY benefits. Only 86 percent of program participants reported being aware of the advance subsidy, and of those 81 percent could correctly describe the duration of the benefit. Taken together therefore, only 69 percent of PMUY beneficiaries in the round-two survey could be said to have an accurate understanding of these basic program elements. Only 75 percent reported receiving the special subsidy. This was an

[17] Overall, those who could read SMS were 8 percent less likely to report learning of a transfer from a neighbor or relative, 4 percent less likely to learn from a bank visit and 29 percent more likely to learn from a bank SMS.

improvement from 57 percent in the first-round survey, but still lower than the other DBT programs examined.

Nevertheless, communication challenges do not seem to have undermined the ultimate effectiveness of the program. Ninety-six percent of households that benefited from PMUY claimed in the second-round survey to have bought a cylinder since April 1st, 2020. Taken together, these results suggest that people purchased cooking gas through the COVID-related disruption, with some doing so without the knowledge or access to the PMUY benefit. Difficulties in communicating and distributing enhanced PMUY benefits persisted through both surveys. Yet the high percentage of respondents claiming to have purchased an LPG cylinder, compared to pre-pandemic trends, demonstrates that the subsidies were still successful in temporarily boosting LPG use by mitigating costs, and likely reached those least able to afford the cost under normal circumstances.

## 5. Public employment: expansion of MGNREGA after easing of lockdown

The Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) was passed in 2005 with the intention to provide public employment for people living on the margins of rural society, especially during times of crisis. Any household that applies is eligible for a maximum of 100 days of work per year, with wages paid within two weeks via DBT as per the rates notified by the federal and state governments. During the 2018/2019 fiscal year, 52 million people benefited from MGNREGA jobs, more than half of whom were women (SPEC 2021).

While there was an increase in the daily wage rate under PMGKY, MGNREGA played a modest role in the early stages of the lockdown. Just under a quarter of respondents to the first-round survey claimed to be eligible. However, of these, only 16 percent reported working under MGNREGA during the initial lockdown, and of the latter, only 60 percent indicated receiving wages due from that work. This low rate of employment largely reflected the broader context at the time; much like overall economic activity, demand for MGNREGA employment declined 36 percent from the previous year in April 2020, according to the figures published by the Government of India (Government of India 2021).

With continued job and income loss, the situation changed dramatically by the time of the second-round survey. Demand for work soared, with 54 percent of second-round respondents who were eligible claiming to have worked for the program between May and July of 2020. Of those who had worked, 82 percent had been paid their benefit in full, and 8 percent had received at least partial payment. These results capture the explosion in MGNREGA employment that was observed during this period, driven also by the return of urban migrants to their rural homes (Sen 2021). In contrast to April, demand for MGNREGA jobs in July of 2020 was 74 percent greater than the previous year (Government of India 2021).

However, while MGNREGA was able to rapidly absorb large numbers of people seeking work, it was not correspondingly successful in sustaining incomes. The sharp increase in demand for jobs confronted a relative shortage of available projects, and this mismatch clearly manifested itself in the results. Of the 46 percent of eligible respondents to the second-round survey who did not work under MGNREGA, 68 percent had wanted to but were not offered an opportunity. Also, many applicants faced tight rationing of jobs, with some reporting being offered as little as five to ten days of work, forcing them to make additional efforts to find alternative sources of employment.

MGNREGA's apparent work shortage may also have had distributional implications. Women were slightly more likely than men to report working under MGNREGA in the second-round survey, unlike the first in which the reverse was true. But the first-round survey showed that those possessing AAY ration cards (the poorest group) were 8 percent more likely to work under MGNREGA indicating that the most vulnerable were able to disproportionately participate in the program under lockdown, even if at greater potential risk. The second-round survey demonstrates no such differential, suggesting that the glut of additional people seeking work may have partially crowded out relatively lower income beneficiaries.[18] That the proportion of people working under MGNREGA who reported using digital payments increased from 3 percent to 17 percent between the surveys—far more than changes observed in other demographic groups—reinforces the notion that structural changes occurred in the MGNREGA workforce between the two surveys.

## 6. Conclusion: social protection and digital payments, through lockdown and beyond

The surveys offer two snapshots of the working of India's social protection response during a greatly disrupted period, the first, in May 2020, under tight lockdown and the second, in September, after gradual re-opening. The lockdown had a massive effect on income and employment, with almost all respondents reporting income or job losses. Some easing and recovery were evident by the time of the second-round survey but the overall trend was still negative, especially for women. Table 3 summarizes some of the changes observed across the surveys, which focus on the implementation of the massive PMGKY relief program.

[18] In principle, MGNREGA also provides unemployment benefits to those willing to work but denied by lack of opportunity to do so. However, in practice, this benefit is very rarely made available.

**Table 3. Change in survey results, by program**

| Results by Program | 1st Round | 2nd Round | Change |
|---|---|---|---|
| **MGNREGA** | | | |
| Prior MGNREGA recipients who worked under program | 15.9 | 54 | ↑38.1 |
| Portion eligible for wages who were paid fully or partially | 60 | 90.3 | ↑30.3 |
| **PMUY** | | | |
| Portion of PMUY beneficiaries who received advance | 57 | 75.2 | ↑18.2 |
| If got advance, portion who bought cylinder | 91.3 | 96.6 | ↑5.3 |
| If bought cylinder, portion of people who received advance | 72.6 | 75.5 | ↑2.9 |
| **PDS** | | | |
| Portion of people who received any rations | 90.1 | 94.4 | ↑4.3 |
| If received a ration, portion of people who received normal and free rations | 53.5 | 61.4 | ↑7.9 |
| **DBT Overall** | | | |
| Portion of transfer recipient who became aware of at least 1 payment | 76.2 | 89.4 | ↑13.2 |
| If aware, portion able to access at least one of the funds | 77 | 92.2 | ↑15.1 |
| **PMJDY** | | | |
| Portion of PMJDY account holders who became aware of payment | 67.5 | 88.7 | ↑21.2 |
| If aware, portion who were able to access funds | 78.1 | 91.5 | ↑13.4 |

The table paints a picture of the shifting implementation constraints over the period. While PMGKY was able to deliver cushioning benefits to hundreds of millions of people, information and logistical constraints were severe during the early stages. Many beneficiaries were initially unaware of their benefits, especially those offered by new programs like PMJDY or complex schemes like PMUY. In addition, once aware, many faced severe perceived logistical constraints to accessing their benefits, such as difficulties in reaching cash-out points, predominantly banks. There is also evidence of logistics-based constraints in the food support supply chain, which is no surprise considering the conditions at the time. At the same time, the migrant crisis underlined the limitations of support programs that are only available locally, rather than being portable across the country.

Four months later, by the time of the second-round survey, logistics and information constraints had eased considerably. Though difficulties remained, including fear of infection, beneficiaries were both more aware of their benefits (although still less clear about the more complex schemes) and more able to realize them. However, with continued income and job loss and a sluggish recovery, as well as the return of millions of migrants to rural areas, a third constraint became more binding, limited ability to offer public work under the MGRNEGA program. More respondents reported finding MGNREGA employment but many others who needed it were not able to do so. Moreover, many of those who succeeded in gaining employment did so for relatively short periods as efforts were made to ration available opportunities across multiple claimants. One lesson from the crisis is the importance of being able to offer a flexible and adaptable response to public works programs if they are seen as key to longer-run social protection in the aftermath of a disruptive lockdown.

The surveys highlight how both information flows and payments processes are evolving rapidly in India with increasing access to smartphones and cheap digital data. The use of assisted digital banking services through agents to receive benefits fell back from their early levels in the lockdown period as people were more able to get to banks, with the fall attributed to a range of trust-related issues. These findings raise questions over the future of agent-intermediated digital banking as a major modality in India. As an intermediate solution, this may fade away with the spread of the low-cost QR code/UPI payments ecosystem and as people become more familiar with digital tools.

At the same time, the use of digital tools and platforms is segmented, by gender and by area. Men are more likely to have household priority in the ownership of smartphones, and to access information on benefits using digital mechanisms, including SMS messaging. Women are more likely to rely on information from others—friends, neighbors or family members. This difference does not appear to have prevented women from accessing benefits, but it does suggest that they are lagging in acquiring the agency made possible through electronic communications. The gendered hierarchy in smartphone ownership and usage contributes to a similar asymmetry between men and women in the adoption of digital payments. Active measures to boost smartphone ownership by women could be a powerful force to encourage wider employment of digital payments, especially if paired with efforts to address broader patterns of differentiated smartphone use among owners.

Results also confirm that the use of digital payment platforms by beneficiaries follows a locally agglomerated diffusion model paralleling the general pattern. Some areas, notably those more proximate to major tech hubs, are well advanced in this respect while others lag badly, despite widespread low-cost access to smartphones and data, and the ubiquity of India's UPI interface. Many beneficiaries will participate in these payment platforms, once local ecosystems are well-established. Lagging states in India, as well as other countries, could look to those locations that have succeeded in achieving critical agglomeration effects to see how best to move forward.

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