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Exploring the vastness of informality and unprotected risk in Indian labour markets

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1. Informal sector in India²

In this paper, we document the growing informalization of India's labour force, and the consequences of this phenomenon for the state of social protection in India. COVID-19 offers an especially effective context for examining these issues, and we draw on our work during the pandemic and lockdown months, as well as that of others, to present evidence for the growing lack of risk protection that informal sector workers and households are subject to.

Having laid out the scope of the problem in this section, we then turn, to the question of how to address this problem in the second section.

1.1 “Informalization” of workers in the formal sector

The growing informalization of the formal workforce is the result of a number of distinct but related forces shaping the Indian economy. On the one hand, distress caused by the persistent uncertainty of agricultural incomes in the last two decades has produced a steady and protracted movement of labour out of the sector and, on the other, the capacity of the manufacturing sector to absorb this surplus labour has been greatly limited by the absence of any significant and sustained corporate investments in the sector. Indeed, large corporations and industries have moved towards cost- and labour-saving technologies owing to the increasing complexity of navigating state and central labour laws.

The jobs for these workers have appeared in the small-scale business sector, and mostly at the micro-end of the scale (solo, nano, etc.). This sector remains unorganised, though growing rapidly³. Over the last 15 years, there has been a 34% increase in the size of the informal sector, considering only non-farm employment (see Table 1). While there is a mild decrease in the share of informal sector employment in the last decade, the evidence suggests that informality in the labour force continues to persist, if not increase. This is a problem from the social insurance perspective, since employers in this sector (when they can be identified clearly) do not bear any responsibility for providing social security to their workers. Therefore, the growing informalization of India's workforce has also meant a growing proportion of its population having no access to employer-provided social insurance.

According to the Periodic Labour Force Survey (PLFS) 2017-18, only 22.8% of Indian workers are in regular wage or salaried employment while the rest are employed in the

²It is important to start with a caveat. The definition of the “informal sector” in India is not fixed or constant, even across different official pronouncements. For a full discussion of this issue, see: Anupama Kumar (2020). *Designing a Universal and Comprehensive Social Security Floor for Informal Sector Workers*. Dvara Research Policy Brief. URL: <https://www.dvara.com/research/wp-content/uploads/2020/03/Designing-a-Universal-and-Comprehensive-Social-Security-Floor-for-Informal-Sector-Workers.pdf>. Given the proliferation of definitions, we will not work with a single definition of the informal sector in this paper, but rather use multiple overlapping definitions based on the data that we are sourcing to make our arguments, and we will appropriately clarify these definitions as and when they appear.

³Amit Basole and Vidya Chandy (2019). *Micro enterprises in India: A multidimensional analysis*, GAME and Azim Premji University. URL: https://cse.azimpremjiuniversity.edu.in/wpcontent/uploads/2019/10/GAME_APU_Microenterprises_In_India_Report_Oct_2019.pdf

TABLE 1: Size and share of informal sector employment in India^{4,5}

Type of Employment: Formal and Informal	Formal			Informal		
	2004-05	2011-12	2017-18	2004-05	2011-12	2017-18
Total non-farm employment (in million)	28.3	34.8	42.8	162.4	207.5	217.0
Total non-farm employment (in %)	14.8	14.4	16.5	85.2	85.6	83.5

informal sector. Even among those in regular employment, 49.6% were not eligible for any form of social security⁶.

The COVID-19 pandemic and the economic consequences of the mandated “lockdown” have had a seismic impact on the labour landscape in India. A particularly significant consequence has been an even further increase in informal sector employment. As the pandemic increased formal sector unemployment, there has been a significant transition of the formal labour force into the informal sector.

A World Bank report⁷, working with data from the Consumer Pyramids Household Survey (CPHS) conducted by the Centre for Monitoring the Indian Economy (CMIE), found that more than 80% of the labour force that could be categorized as formal in August 2019 remained formal in December 2019 – but, thereafter, the formal labour market underwent a dramatic turn. More than 30% of the labour force that could be categorized as formal in December 2019 had transitioned to informal status by April 2020.

1.2 Features of informal sector employment and the need for risk protection

Volatility in Income

Informal sector work is mostly based on casual employment structured through personal and social relations rather than contractual arrangements with formal guarantees. Such a relationship leaves a labourer vulnerable because of (a) the lack of steady and assured employment and income, and (b) the lack of any insurance to deal with external shocks. Collins, et al. (2009)⁸ highlight the irregularity and unpredictability of income as one of the main factors characterizing the lives of low-income households in India. This is

⁴Santosh Mehrotra (2019). *Informal Employment Trends in the Indian Economy: Persistent informality, but growing positive development*. Geneva: ILO.

⁵For this table, the informal sector consists of all unincorporated private enterprises owned by individuals or households engaged in the sale and production of goods and services operated on a proprietary or partnership basis and with less than ten total workers.

⁶Government of India (2019). *Periodic Labour Force Survey 2017-18, India*. URL: http://www.mospi.gov.in/sites/default/files/publication_reports/Annual%20Report%2C%20PLFS%202017-18_31052019.pdf

⁷World Bank (2020). *South Asia Economic Focus Fall 2020*. URL: <https://doi.org/10.1596/978-1-4648-1640-6>

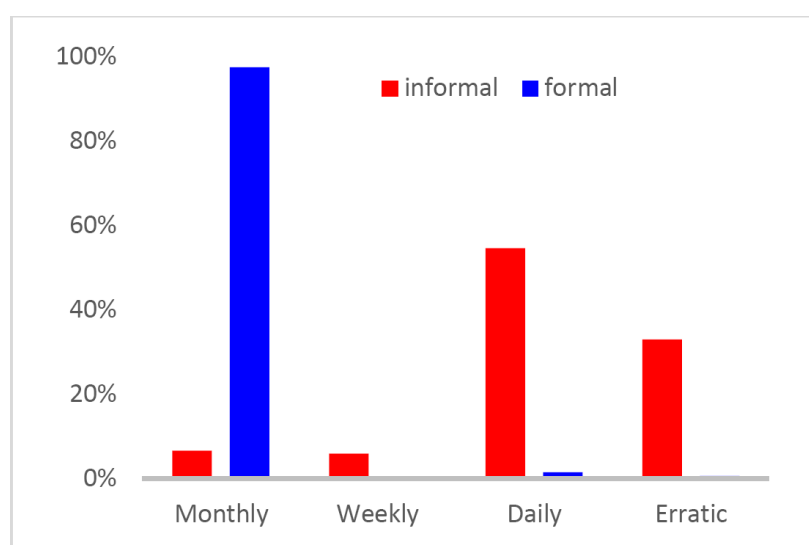
⁸Daryl Collins, Jonathan Morduch, Stuart Rutherford, and Orlanda Ruthven (2009). *Portfolios of the Poor: How the World's Poor Live on \$2 a Day*. Princeton, N.J.: Princeton University Press.

the main reason that the bottom of the income distribution in India is still occupied by **informal sector households**⁹.

Recent work by Sahasranaman & Kumar (2020)¹⁰ shows that over 86% of the bottom decile between 2014-19 is composed of households employed primarily in the informal sector. Even worse, these households have experienced a decline in real income during that period, making them the most economically vulnerable workers in the Indian income distribution.

Recent data from the CPHS round conducted in 2020 shows up the disparity in income regularity very clearly. As can be seen from Figure 1 below, almost the entire informal sector is dependent on erratic, daily or weekly payment of wages, as opposed to the formal sector which pays out wages at a fixed monthly rate.

FIGURE 1: Income frequency of informal and formal sector workforce



Source: CMIE CPHS May-August 2020

The COVID-19 crisis has had consequences across different income segments. Early reports in May showed that 84% of households reported a fall in income due to the lockdown. The unemployment rate, on the other hand, had increased from 7% in March to about 25% in early May¹¹.

Data collected between May and August, and presented in Figure 2 below, shows that informal labourers were also most likely to suffer a pay-cut. The left-hand panel of Figure

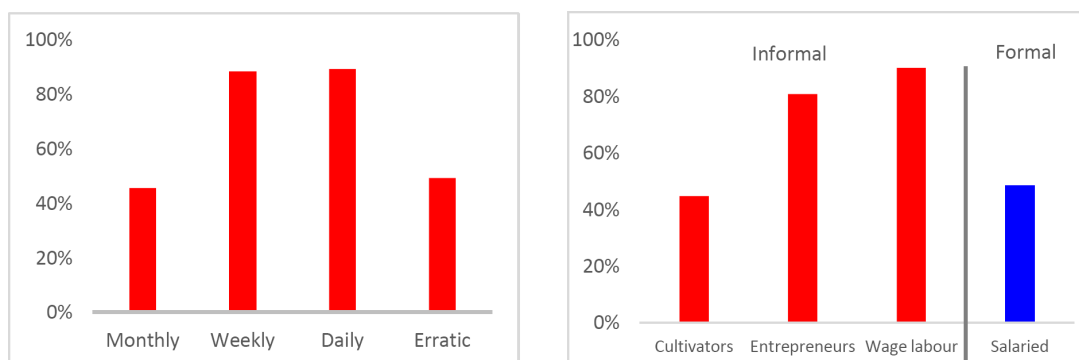
⁹This is based on our work with the CMIE CPHS data, wherein we distinguish between formal and informal sectors using the occupational categories present in the CPHS. Households are categorised as informal if their primary occupation is one that does not provide a regular salaried income. For more details, see under household groups here: <https://consumerpyramidsdx.cmie.com/kommon/bin/sr.php?kall=wkb>. Presumably, the World Bank (2020) analysis cited in the last paragraph of Section 1.1 also uses a similar definition to distinguish between the two categories, since it also works with the CMIE CPHS data.

¹⁰Anand Sahasranaman & Nishanth Kumar (2020). *Income distribution and inequality in India: 2014-19*. URL: <https://arxiv.org/abs/2010.03602>. This paper also works with the CMIE CPHS data and uses a similar definition of the informal sector as we do when we work with that data.

¹¹Marianne Bertrand, Kaushik Krishnan, and Heather Scofield (2020). *How are Indian households coping under the COVID-19 lockdown?* Rustandy Centre for Social Sector Innovation blog. Chicago Booth. URL: <https://www.chicagobooth.edu/research/rustandy/blog/2020/how-are-indian-households-coping-under-the-covid19-lockdown>

2 indicates that about 90% of daily and weekly wage labourers that were still employed experienced a decline in wages. The right-hand panel indicates that even formal sector workers on regular salaries (about 50% of them) experienced pay cuts in the lockdown months.

FIGURE 2: Pay-cuts during lockdown across formal and informal sectors



Source: CMIE CPHS, May-August 2020

Using the data from CPHS, we construct the distribution of monthly surplus of households for the month of May¹² in years 2019 and 2020. Figure 3 plots these distributions.

FIGURE 3: Surplus distribution of formal and informal households, May 2019 vs May 2020



Source: CMIE CPHS, 2019-2020

We see from the figure that in May 2019, a majority of formal and informal households were carrying positive surpluses, with the distribution of formal household surpluses having a thicker tail at the positive end, owing to the presence of middle- and high-income

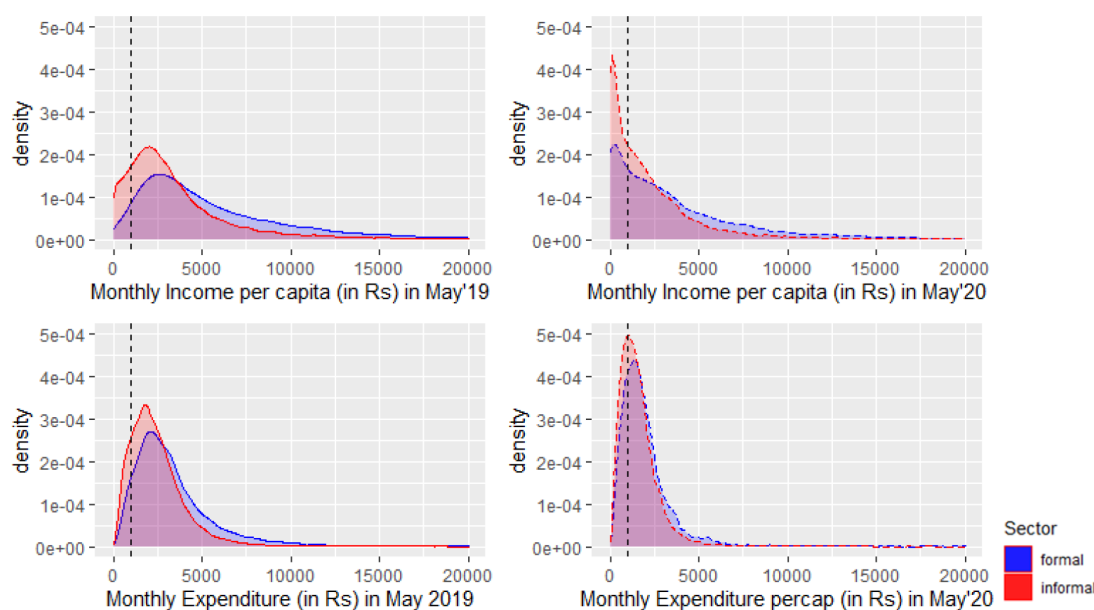
¹²To take into account the effect of seasonality in income, especially for those employed in the informal sector, we compare the months of May in 2019 and 2020.

households. By May 2020, however, both distributions had shifted to the left, and the majority of informal sector households were now showing negative surpluses.

We see in Figure 3 that a very large proportion of formal sector households also showed negative surpluses in May 2020. This can be attributed to the job and income losses for formal sector workers illustrated in Figure 2. Further, this also points to a possible increase in the informalization of the workforce itself, as discussed in Section 1.1, and explains some of the worsening of the surplus distribution for informal sector workers.

We learn more about the dynamics of poverty transitions by looking at the income and expense distributions separately, which we plot in Figure 4.

FIGURE 4: Monthly Income and Expenditures of workers, May 2019 vs May 2020



Source: CMIE CPHS, 2019-2020

The dotted line in the panels of Figure 4 represents the national poverty line as defined by Rangarajan Expert Committee on poverty measurement in 2014¹³. The top two panels in the figure indicate a clear shift across both formal and informal sector households to incomes below the poverty line. Overall, our estimates suggest that about 9% more households have moved below this conservative poverty line. For the informal sector alone, households below the poverty line increased from 13% (of all informal sector households) to 15% between May 2019 and May 2020.

We might expect that these numbers have recovered back to above the poverty line quickly with the removal of lockdown restrictions and the opening of the economy. Indeed, various reports indicate that the recovery of employment has been quite rapid. The unemployment rate reached a maximum of 23.5% in April before declining to 8.3% at the end of August 2020¹⁴. Yet, the sharp drops in income levels during those early months

¹³The poverty line estimate used here is the one defined for rural regions (Rs. 972 per capita per month), which is lower than that for urban regions. Secondly, this number has not been inflation adjusted. These two qualifiers indicate that the actual transitions into poverty might be even greater than the ones shown in Figure 4.

¹⁴CMIE (2020). *Unemployment Rate in India (Beta)*. URL: <https://unemploymentinindia.cmie.com/>

of lockdown will likely have a long-term effect on household finances and well-being. As the bottom panels of the figure show, the recurring and essential nature of consumption expenditures limited the sacrifices households could make on their total expenditures. In order to support those expenditures, households most likely improvised various coping strategies to “farm for liquidity” as characterized by Mas (2015)¹⁵.

Illiquidity of assets

According to Mas, one of the strategies the low-income households typically use to generate liquidity is selling assets. We may ask what capacity low-income households in India might have to employ this kind of strategy. Badarinza et al. (2016)¹⁶ recently reviewed the state of Indian household balance sheets, using data from the decadal All India Debt and Investment Survey (AIDIS) conducted by the National Sample Survey Organisation (NSSO). They find that most Indian households do hold assets, but the majority of these asset holdings are not financial in nature – more than 85% of Indian households hold real estate assets, and in this respect, India stands out among developing countries. Similarly, Kumar et. al (2020)¹⁷ show that although Indian households employed in the informal sector have experienced a significant increase in their net-worth over the last decade, this increase is to be attributed primarily to increases in the value of real estate. The market for real estate in rural India is anything but liquid. Therefore, without any real increase in the holdings of financial assets, informal sector households are ill-equipped to manage the volatility in their incomes and cannot really farm for liquidity by selling assets.

It is worth mentioning that gold and jewelry feature prominently among physical assets held by Indian households. This is particularly true for rural households in the last two quintiles of the income distribution¹⁸ – between 2003 and 2013, the share of gold and jewelry in physical assets increased from less than 10% to almost 20% among rural households in the bottom quintile of the income distribution.

The importance of gold as a store of value and risk-hedge becomes especially apparent in the aftermath of COVID-19, as borne out by the experience of Dvara SmartGold, which markets a “phygital” gold-based micro-savings product to rural households in the form of a systematic investment plan. Dvara Research used administrative datasets from Dvara SmartGold’s sales to analyse customers’ investment patterns before and after the COVID-19 outbreak¹⁹. In the pre-COVID months (October 2019 to February 2020), most customers consistently invested ₹250 per month (which was equivalent to 0.061 grams of gold). During this period, the customer base grew at an average monthly rate of 150%

¹⁵Ignacio Mas (2015). Money Resolutions, A Sketchbook. CGAP. <https://www.cgap.org/research/publication/money-resolutions-sketchbook>

¹⁶Cristian Badarinza; Vimal Balasubramaniam and Tarun Ramadorai, (2017). The Indian Household Financing Landscape. India Policy Forum, 13, (1), 1-71. URL: https://econpapers.repec.org/article/ncancaerj/v_3a13_3ay_3a2017_3ai_3a2017-1_3ap_3a1-71.htm

¹⁷Nishanth Kumar, Vaishnavi Prathap, Asmita Chatterjee, and Misha Sharma (2020). A Tale of Two Balance sheets. Unpublished.

¹⁸Vishwanath C, and Rakshith S. Ponnathpur (2020). *An AIDIS Analysis: Evolution of Physical and Financial Asset Portfolios between 1993 and 2013*. Dvara Research Blog. URL: <https://www.dvara.com/blog/2020/08/18/an-aidis-analysis-evolution-of-physical-and-financial-asset-portfolios-between-1993-and-2013/>

¹⁹Monami Dasgupta and Rakshith Ponnathpur (2020). *Savings in Gold by Low-Income Households: An Empirical Study*. To be published on the Dvara Research Blog.

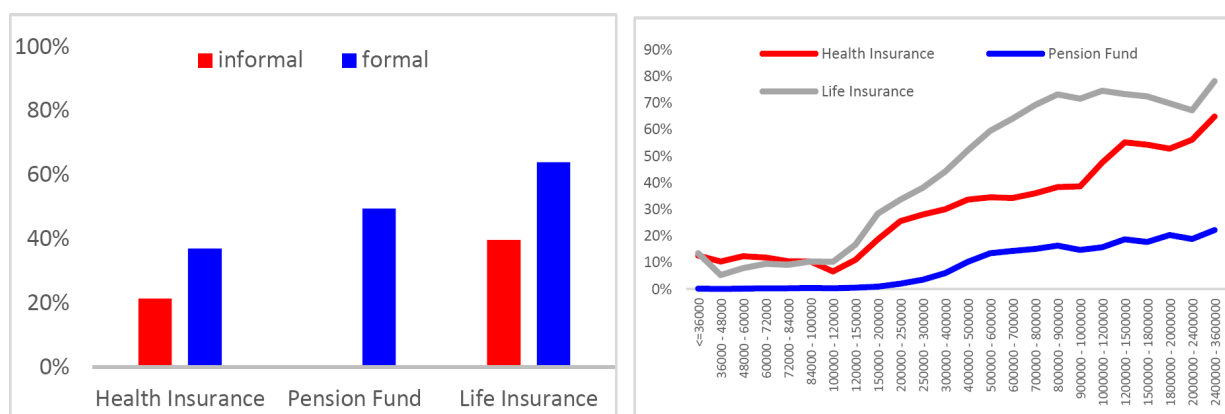
(approx.), showing a steady demand for a digital gold-based micro-savings product²⁰.

In the months after COVID-19 forced lockdowns across India, a majority of customers who were investing in a regular, disciplined manner before, briefly opted for the flexibility option, particularly in the months that coincided with the first phase of loan moratoriums announced by the Reserve Bank of India (March-May 2020). However, most customers who had skipped installments during this period caught up with their saving goals by investing additional installments in subsequent months. This prima facie indicates that some segments of customers have shown a commitment to investing in this product even during an adversity as severe as the COVID-19 pandemic. The analysis also indicated that prior to the pandemic, investors who owned a business, who were salaried and had family members working abroad invested higher amounts than investors from other occupational backgrounds. However, post pandemic, higher investments were made by wage labourers, gig-economy employees and agricultural workers signaling that lower-income segments may be looking to gold as a strategy for building precautionary savings for the future.

Lack of health insurance and risk protection mechanisms

If we consider the most basic risk protection mechanisms such as life insurance, health insurance and pensions (income during retirement), then there remains in India a large gap in coverage. Data from the CPHS (as of December 2019), shows that less than half of informal sector workers have access to any of the above forms of risk protection. While there has been some increased access to mortality and health risk protection through social insurance schemes, the proportion of the population vulnerable to economic shocks continues to be alarmingly high. Figure 5 below provides the coverage of basic risk protection mechanisms (such as life insurance, health insurance and pensions) across the income distribution (right-hand panel), and across the formal and informal sectors (left-hand panel). It is evident that these products are not suitably available for low-income households.

FIGURE 5: Access to health insurance of informal sector workforce



Source: CMIE CPHS, December 2019

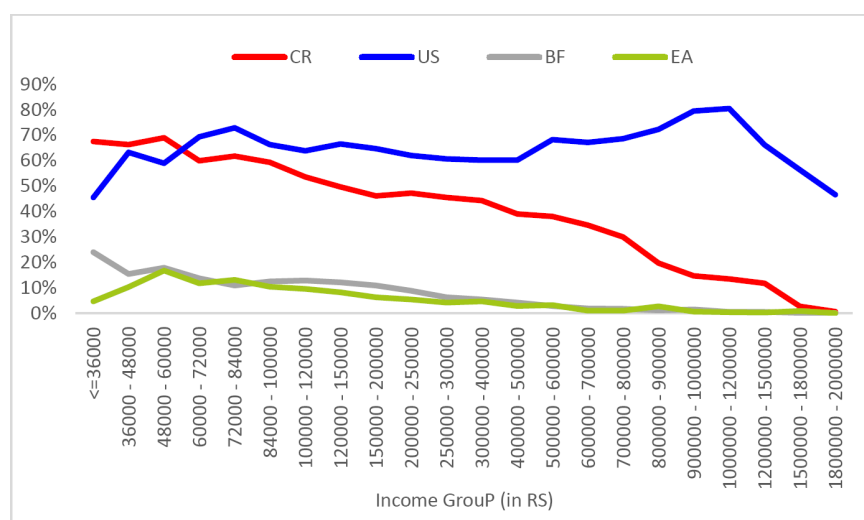
²⁰The very high growth rate is partly accounted for by the fact that Dvara SmartGold only began its operations in October 2019, so the base is quite small.

Finally, risk protection mechanisms such as life insurance, health insurance, etc. are particularly relevant for informal sector workers as these workers are often employed amidst the most hazardous workplace conditions. The death of the primary income earner in an informal sector household, or a serious injury to that earner making it impossible for him or her to earn an income, are two of the most common reasons for such a household to slide into poverty. More than 75% of all Indians are not covered by any form of life insurance, and an Indian is assured of only 8% of what may be required to protect a family from financial shock following the death of an earning member²¹.

1.3 Coping strategies during lockdown

In most parts of the country, a complete lockdown was effective till June and over the course of the next few months, different states have restarted economic activity gradually. In order to understand how households were coping with the effects of the lockdown, we added some questions to the CMIE CPHS survey wave of May-August 2020²². Our survey uncovered, in accordance with the incidence of income losses, a sudden surge in the number of households with members actively looking for additional sources of income (EA) with more than 10% of all households reporting so. Other coping strategies were borrowing in-kind from social networks (BF), reduction in consumption (CR) and use of savings by households (US) to manage liquidity crises. Figure 6 below, depicts this data across the income distribution, for the months of April-July 2020 (the May wave of the survey would have asked questions about household experiences in April, and so on).

FIGURE 6: Coping strategies employed by households along the income distribution



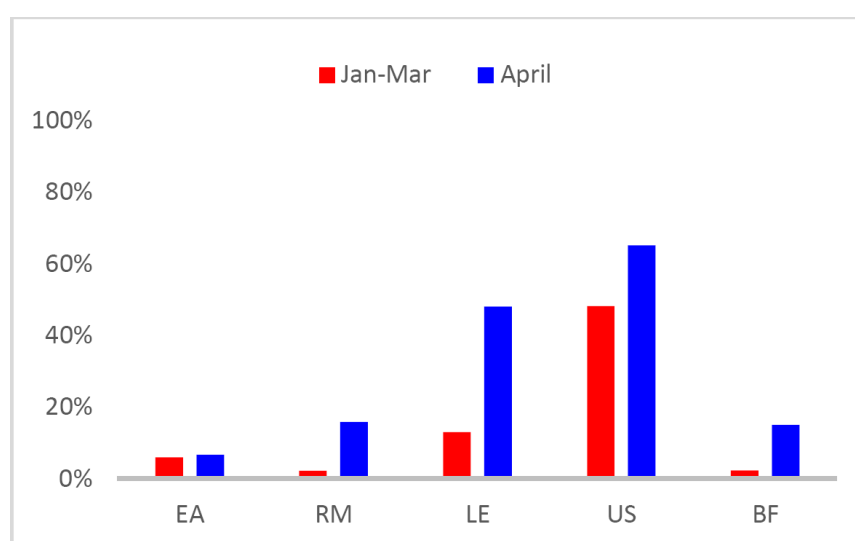
Source: CMIE CPHS, April-July 2020

²¹Aparajita Singh (2019). 988 Mn Indians Do Not Have Life Insurance. Those Who Do, Are Insured For 7.8% Of What's Needed To Cover Financial Shock. India Spend. URL: <https://www.indiaspend.com/988-mn-indians-do-not-have-life-insurance-those-who-do-are-insured-for-7-8-of-whats-needed-to-cover-financial-shock/>

²²Dvara Research and CMIE (2020). Dvara-CMIE Survey on Access to Cash and Coping Mechanisms during COVID-19. URL: <https://www.dvara.com/research/social-protection-initiative/dvara-cmie-survey-on-access-to-cash-and-coping-mechanisms-during-covid-19/>

The figure clearly illustrates the level of distress that low-income households, in particular, faced during the pandemic – while the use of savings to tide over a crisis would be regarded as only appropriate, the widespread reduction in consumption among these households (with incidence rates of 60% or more) points to hardships that could well impose long-term costs on household health (and therefore, household finances), as both quantity and quality of food intake were most likely compromised. Evidently, the worst month was April. Figure 7 compares the use of different types of coping strategies across either side of the lockdown (our survey questions also asked how households coped with liquidity shortages in the months of January-March). Here, the CR component is disaggregated into lesser expenditure on consumption per meal (LE) and reduced number of meals (RM).

FIGURE 7: Use of coping strategies before and after lockdown



Source: CMIE CPHS, January-April 2020

The largest changes in household behaviour post lockdown was with respect to uses of LE and BF as coping strategies. We note that BF represents non-financial borrowing, and this stands to reason since availability of financial lenders (whether formal or informal) was virtually zero during the month of April.

1.4 Access to essential services and special schemes announced

The announcement of a nation-wide lockdown on March 24, 2020, was followed two days later by a slew of measures under the Pradhan Mantri Garib Kalyan Yojana (PMGKY) to alleviate the anticipated financial hardships that the pandemic and lockdown would create for low-income households. These measures mostly took the form of Direct Benefit Transfers (DBTs) of both cash and kind²³.

²³Press Information Bureau. (2020). *Finance Minister announces Rs 1.70 Lakh Crore relief package under Pradhan Mantri Garib Kalyan Yojana for the poor to help them fight the battle against Corona Virus*. URL: <https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1608345>

On May 14, 2020, further welfare measures were announced²⁴. The Government also acknowledged the necessity of allowing certain “essential services” to continue uninterrupted during the lockdown periods, among them banking facilities (including BC agents) and shops (including ration shops) that the poor were likely to use, in particular, in order to avail of the PMGKY scheme.

Here, we present some survey results from our (Dvara Research’s) own work, and from a large-scale survey conducted by Dalberg, to understand if these welfare measures actually reached their intended beneficiaries, most of whom were informal sector workers and households.

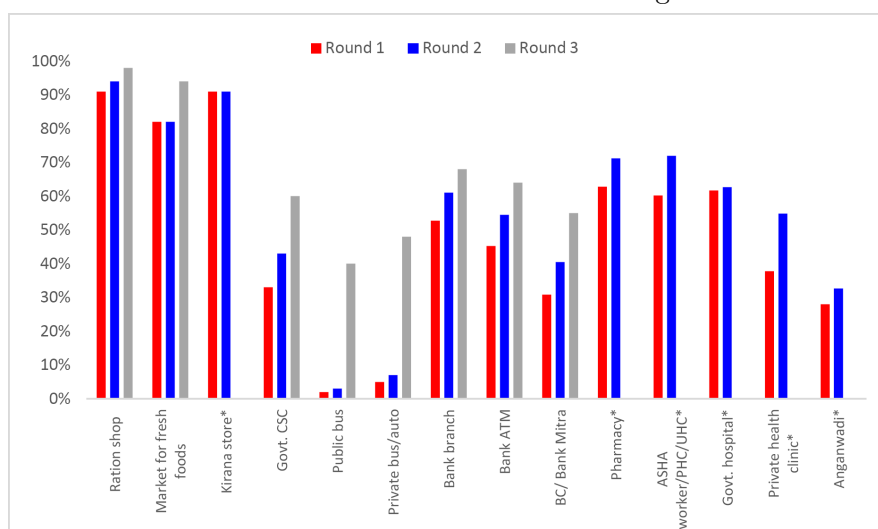
In the months of April through July, Dvara Research partnered with 12 Microfinance Institutions (MFIs) to conduct surveys of 347 households, their customers, in 47 districts across nine states. The households were asked whether they were able to access essential services, especially banking, and were able to avail of the benefits promised by the welfare schemes.

The survey tracked households every two weeks, and was conducted in three waves, April 23-May 7, May 15-27, and June 19-July 6. Even though the sample size is small, we believe that the results from the survey are useful because of the way our survey questionnaire was able to tease out the different reasons for beneficiary exclusion. These different reasons also provide a more nuanced perspective on the survey results, as we are able to understand why numbers in a later round of the survey might wrongly indicate a worsening situation given that lockdown conditions had alleviated. In a similar vein, our survey results allow us to differentiate our story about exclusion from Dalberg’s story, even if the overall rates of exclusion identified by these two very differently sized surveys remain quite similar.

In Figure 8, we find that ration shops and *kirana* stores remained highly accessible during even the most stringent periods of lockdown (Rounds 1 and 2), but this was not true of banking facilities, which even in early July remained mostly unavailable despite the fact that many of the cash transfer schemes were being administered through banking channels.

²⁴Press Information Bureau. (2020). *Finance Minister announces short term and long-term measures for supporting the poor, including migrants, farmers, tiny businesses and street vendors*. URL: <https://www.pib.nic.in/PressReleasePage.aspx?PRID=1623862>

FIGURE 8: Access to essential services during lockdown



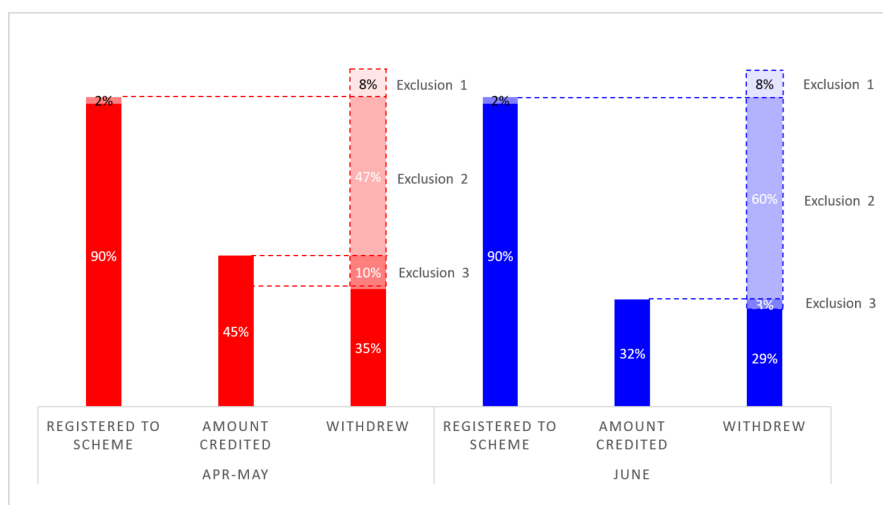
*Question posed only in Round 1 and 2

Source: Dvara Research MFI Survey, April-June 2020

The situation of a beneficiary being excluded from cash transfers can, however, arise even if banking facilities are accessible. Figure 9, again based on the MFI customer survey conducted by Dvara Research, presents the data for cash transfers in April and May (Rounds 1 and 2 combined) against those in June, for a balanced sample of 219 households that participated in all 3 rounds. Here, the 2% number refers to respondents who were not registered through the regular channels but were offered ad hoc registrations by their respective states' exception-handling mechanisms and were therefore able to be included in the cash transfers programmes.

All of these households (the 2%) are therefore included in the 45% whose accounts were credited, and the 35% who were able to withdraw from their accounts, in April-May. We notice from the left-hand panel of Figure 9 that in April-May, 8% of respondents were unable to avail of PMGKY (or any other) cash transfers, a full 47% of respondents were registered but did not receive a credit into their accounts, while only 10% of respondents were unable to withdraw even after receiving a credit into their accounts.

FIGURE 9: Exclusion in cash transfers during lockdown



In fact, things may have worsened in June relative to earlier. But there are at least two other possible explanations for what we see: (a) the MFIs conducted the survey in June during the time of the month that it was convenient for them to do so, and therefore, it is possible that some of the households were surveyed early in the month, and had not received the June transfer credited into their account by that time, (b) households needed to travel to their banks in order to even learn whether their accounts had been credited, and therefore, it is possible that the transfers in April and May were so small (relative to the cost of traveling to the bank) that many households did not even bother to make the journey.

Turning next to the Dalberg survey²⁵, which covered 47,000 households across 15 states conducted in two rounds between April 5, 2020 and June 3, 2020, about 15% of respondents in May were found to not be covered under any of the cash schemes announced by the government. This roughly compares to the 8% exclusion of type 1 identified by Dvara's survey (See Figure 9), if one allows for the fact that Dvara's survey did not include West Bengal or Kerala, both of which states the Dalberg survey found to have much higher rates of exclusion due to lack of coverage (more than 20%) than states like Rajasthan (less than 3%) that were included by Dvara. With regard to the success of receiving cash transfers, the Dalberg survey recorded much more favorable numbers than the Dvara survey – in May, only 14% of covered households had not received any cash transfers.

It is not clear, however, from reading the Dalberg report if receipt of cash transfers is to be equated with households actually having the cash in their hands – most likely, not, because 43% of respondents in May had still not withdrawn their cash receipts, so that the actual success rate of cash reaching the hands of beneficiaries was recorded at 48% in May, not so much higher than the 35% success rate recorded by the Dvara survey. There is an important qualitative difference, though, between the two numbers. The bulk of the exclusion identified by the Dalberg survey happened at the point of withdrawal, whereas the exclusion identified by the Dvara survey happened in equal parts at the point of crediting accounts and at the point of withdrawal from those accounts.

²⁵Swetha Totapally, Petra Sonderegger, Priti Rao, and Gaurav Gupta (2020). Efficacy of government entitlements for low-income families during Covid-19. Unpublished.

2. The state of social security in India

In this section, we take up the question of what can be done to improve the state of social security in India. First, we take the existing framework for social security in India as given and ask what can be done to minimize exclusion errors. Second, we take up the legal architecture supporting social protection in India and argue that it makes no specific allowance for social protection to the informal sector. It is a failing of statutory omission, and this error has sought to be rectified by policymakers through the ad hoc introduction of various schemes. We show that the gaps in social protection for informal sector workers, of which several examples have already been cited earlier in this paper, are to be primarily sourced in this mal-adapted structure, and we argue for its overhaul.

2.1 Minimizing Exclusion

Cash transfers through digitized modes have come to dominate social protection delivery systems across states in the country, especially in the wake of COVID-19. This is the new face of DBTs, wherein cash entitlements under welfare schemes are directly transferred into the bank accounts of registered beneficiaries. Our assessment of the “pipelines” that deliver these DBTs reveals a fundamental truth. India’s social protection system is designed to reduce inclusion errors (i.e., benefits being delivered to an ineligible citizen) rather than exclusion errors (i.e., benefits not being delivered to an eligible citizen). The existing infrastructure instated under DBT has been built to tackle inclusion errors through its various and stringent identity verification protocols. Although some realized gains have resulted from the DBT system in the form of savings of administrative costs²⁶ and standardization of processes under welfare schemes, they are not without their own set of disadvantages. The problem is that mechanisms that seek to reduce inclusion errors may also result in exclusion of deserving recipients of welfare transfers.

There are various layers to these exclusionary mechanisms. The most fundamental exclusionary factor is the “financial inclusion” prerequisite. The DBT system automatically precludes the unbanked and the underbanked since it relies upon banking infrastructure to deliver cash. Some of the pre-requisite design features for the DBT system to work seamlessly are end-to-end digitization of records, error-free seeding of Aadhaar with beneficiaries’ bank accounts, efficient back-end processing of transfers in the banking system, responsive grievance redressal, and a fully working cash-out architecture. These features continue to remain inadequate in many regions, especially those which lack basic electric or digital connectivity in the first place or those which are more likely to be populated by households in need of welfare transfers.

Dvara Research has developed a working framework to map points of exclusion across the various processes of the DBT system, viz. targeting, enrolment, backend processing, and cash-out²⁷, to understand the various forms of exclusion. The framework guides the exercise of end-to-end tracing of documented and possible points of exclusion across

²⁶DBT Mission (2020). *Estimated Gains*. URL: <https://dbtbharat.gov.in/estimatedgain>

²⁷Dvara Research (2020). *Falling through the Cracks: Case Studies in Exclusion from Social Protection*. URL: <https://www.dvara.com/research/social-protection-initiative/falling-through-the-cracks-case-studies-in-exclusion-from-social-protection/>

the DBT cashflow mechanism. It highlights different factors that may cause deserving citizens to fall through the cracks. These factors, albeit applicable universally for welfare beneficiaries across time frames, may get further exacerbated due to the pandemic and even more so for the informal sector as characterized in Section 1 of this paper.

First layer of exclusion: The first point of exclusion within the DBT system is the targeting methodology for identifying beneficiaries. In context of the DBT framework, although a few schemes allow for self-registration²⁸, most depend on the Below Poverty Line (BPL) and Socio-Economic Caste Census (SECC) lists for identifying beneficiaries. The reliability of Proxy Means Testing (PMT), as seen in the case of identifying deprived households in SECC, has been called into question multiple times in the past. Although SECC is an improvement over the BPL approach, concerns related to its data have emerged. Vested interest to overstate the extent of deprivation by respondents and errors in enumeration leading to under-counting of the poorest sections are some of the major concerns associated with SECC (2011)²⁹. Lastly, SECC was conducted in 2011, almost ten years ago, and is therefore not up-to-date³⁰.

Second layer of exclusion: Given the targeted nature of most DBT schemes, the process of enrolment consists of stringent eligibility checks which require the beneficiary to submit a range of documents to prove his or her eligibility. Prospective beneficiaries have to incur significant costs, for instance, foregoing a day's wage, because they have had to make multiple visits to finish the enrolment process or procure necessary documents. Secondly, given the digitized formats under DBT, database/spelling errors during the application processing stage might lead to the failure of validation checks during the onboarding of beneficiaries onto the Public Financial Management System. Such errors may take an inordinately high time to get corrected, given the fragmentation of enrolment points under DBT.

Third layer of exclusion: Backend processing involves the transfer of funds in the form of payment files from the relevant Ministry/Department to beneficiary accounts via the National Payments Corporation of India's (NPCI's) digital infrastructure. Most DBT transactions rely on the digital infrastructure of the Aadhaar Payment Bridge (APB) and are routed using the Aadhaar-enabled Payment System (AePS)³¹. This stage may be characterized by transaction failures, i.e., failure of crediting a beneficiary's account, which may occur due to a variety of reasons. These include improper Aadhaar seeding, invalidity of account status (blocked/frozen/dormant), pending Know Your Customer (KYC), etc.

²⁸Vishwa Mohan (2020). *Pushing to increase beneficiaries under PM-Kisan, govt allows farmers to self-register for scheme*. Time of India URL: <https://timesofindia.indiatimes.com/india/pushing-to-increase-beneficiaries-under-pm-kisan-govt-allows-farmers-to-self-register-for-scheme/articleshow/73160769.cms>

²⁹Naresh C. Saxena (2015). *Has It Ignored Too Many Poor Households? Socio Economic Caste Census*. Economic & Political Weekly, 50(30). URL: <https://www.epw.in/journal/2015/30/commentary/socio-economic-caste-census.html>

³⁰Balwant S. Mehta and Arjun Kumar (2019). *Dear Govt, Welfare Schemes Will Work When Poverty Data Is Reliable*. The Quint. URL: <https://www.thequint.com/voices/opinion/poverty-data-tendulkar-committee-outdated-bjp-government-welfare-schemes>

³¹DBT Mission (2019). *Standard Operating Procedure for DBT Payments*. URL: <https://dbtbharat.gov.in/data/documents/SOP%20for%20DBT%20Payments.pdf>

Fourth layer of exclusion: Assuming the beneficiary did not fall through any of the afore-said fractures in the DBT pipeline and his/her account was credited successfully, he or she may still face issues while withdrawing the benefit amount. This issue might sometimes be the very unavailability of a cash-out point (especially exacerbated during the COVID-19 lockdown) or, even when cash-out facilities may be present, operational issues such as network failures, biometric failures, and in some cases, overcharging/fraud can interfere with proper last mile delivery of DBTs.

Since the COVID-19 lockdown, many of these issues have been exacerbated and require immediate attention in order to provide timely relief to citizens whose livelihoods have been adversely affected. In the table below, we provide broad recommendations which would help policymakers and service providers to close the gaps beneficiaries might fall through in the welfare system. The recommendations in this table are drawn from our extensive research of exclusion in DBTs.

TABLE 2: Recommendations to eliminate exclusion in DBTs

DBT Process	Key Recommendations
Cash Withdrawal	Increasing Access Point Density (number of cash-out points per capita).
	Increase uptake of National Bank for Agriculture and Rural Development's (NABARD) PoS devices subsidy by rural and cooperative banks.
	Design alternative authentication protocols in case of device or network failure.
	Monitor access points and set up a Complaints Management System.
	Revise incentive structures in favour of individual agents.
Back-end Mechanisms	Reporting of AePS transaction failures by NPCI and periodic auditing of DBT transactions at all banking points.
	Commission agents specifically with the task of correcting database errors.
Enrolment Procedures	Increase the functional capacity of enrolment points to include record corrections in scheme databases, issuance of certificates required as proof of eligibility, corrections in Aadhaar details, etc.
Targeting Methodologies	Adopt mixed identification strategies as in the case of PDS, where states have the discretion to develop additional categories of eligibility.
General	Accountability mechanisms must be instated for all entities involved in DBT-delivery, including CSCs and BC Network Managers. Social audits proposed ³² by Comptroller and Auditor General (CAG) for PM Kisan and PM Ayushman Bharat must cover such functionaries in their scope.

2.2 Structural Issues

The various statutes that speak to issues of social protection typically refer to the formal and informal sectors as organised and unorganised, respectively. In this Section, therefore, we follow this usage as much as possible. These statutes point to a clear distinction between social security for workers in the organised sector and its absence (by omission) for all other workers in any specific terms. The Code on Social Security, 2020 provides that

³²TNN (2020). *CAG to audit ModiCare, PM Kisan schemes*. Times of India. URL: <https://timesofindia.indiatimes.com/india/cag-to-audit-modicare-pm-kisan-schemes/articleshow/77732555.cms>

an establishment is in the organised sector if it has ten or more employees³³. This Code consolidates a number of earlier enactments, including the Employees' Provident Funds and Miscellaneous Provisions Act, 1952; the Employees' State Insurance Act, 1948; the Payment of Gratuity Act, 1972 and several others³⁴. These enactments provided specific benefits to employees in the organised sector, but as has already been described, this accounts for only a small part of the Indian workforce (additionally, because a large percentage of enterprises fall far short of the ten-person threshold)³⁵.

The Unorganised Workers Social Security Act, 2008 ("UWSSA") provided for registration of unorganised workers, but did not make specific provision for social security measures³⁶. Instead, s. 3 of the UWSSA provided that the Central and State governments were to frame schemes for the benefit of informal sector workers, on subjects such as life and disability cover, maternity benefits, provident fund, old age benefits and housing. The UWSSA did not provide for minimum benefit floors or any specific requirements for social security. While the UWSSA has been replaced by the Code on Social Security, 2020, s. 109 of the Code retains the language of s. 3, UWSSA. Thus, presently, there is no comprehensive set of social security measures for workers in the informal sector³⁷.

In place of a statute or set of statutes, there are several ad hoc schemes in operation to provide social security for those outside formal employment, i.e., for the general population (and informal workers are covered insofar as they are part of the general population). Several states also operate welfare schemes on several subjects³⁸. The following features are common to schemes framed for the benefit of informal workers.

First, as has been noted already, schemes are rarely designed solely for workers as workers, but rather for any person outside the scope of organised sector employment. Any person who satisfies the income targeting criteria may receive benefits under NSAP or JSY, for instance, while APY and PMSYM are available to any person who does not otherwise receive benefits in the formal sector³⁹.

³³S. 54 r/w s. 85, Code on Social Security, 2020.

³⁴S. 164, Code on Social Security, 2020.

³⁵The majority of micro-enterprises in India – 95.98% of all MSMEs – are proprietary concerns. Government of India. (2020). *Annual Report 2018-19*. URL: <https://msme.gov.in/sites/default/files/Annualrprt.pdf>. As of 2013-14, about 55% of enterprises had only a single worker, while another 32% had only two or three workers. Amit Basole and Vidya Chandu (2019). *ibid*. More than 84% of firms are owner-managed. Santosh Mehrotra, and Tuhinshubra Giri (2019). *The Size Structure of India's Enterprises: Not Just the Middle is Missing*. Centre for Sustainable Employment Working Paper Series, 06.

³⁶Rajan (2020) has pointed out that this means that there is little incentive for workers to register themselves as unorganised sector workers. S. Irudaya Rajan. (2020). *Registering Benefits: A Future Path of Action for Self-Employed Workers*. Dvara Research Blog. URL: <https://www.dvara.com/blog/2020/08/25/registering-benefits-a-future-path-of-action-for-self-employed-workers/>

³⁷Anupama Kumar. (2020). *Comments on the Social Security Code, 2020*. Dvara Research Blog. URL: <https://www.dvara.com/blog/2020/10/21/comments-on-social-security-code-2020/>

³⁸Rajeshwari Deshpande, Louise Tillin, & K.K. Kailash (2017). *States as laboratories: The politics of social welfare policies in India*. *India Review*, 16(1), 85-105.

³⁹Nishanth Kumar (2019). *Old wine in a new bottle? – An analysis of the Pradhan Mantri Shram-Yogi Maandhan*. Dvara Research Blog. URL: <https://www.dvara.com/blog/2019/02/05/old-wine-in-a-new-bottle-an-analysis-of-the-pradhan-mantri-shram-yogi-maandhan/>

Second, while there are several schemes in operation, they do not form a comprehensive social security net. There are several important gaps in coverage. For instance, the Ayushman Bharat scheme provides insurance of Rs. 5 lakhs per household for the bottom 40% of India's households for in-patient hospital care⁴⁰. It does not, however, address the disparity in the availability of secondary and tertiary care between states in India, nor does it address concerns that the sum assured is insufficient for certain kinds of illnesses⁴¹. Similarly, while there are several pension schemes available to persons outside formal employment, these provide very limited protection in old age. The pension amounts under NSAP fall far short of minimum per capita expenditure⁴², while those under the Atal Pension Yojana and PM Shram Yogi Maandhan are not indexed for inflation. There have been attempts to rationalize the present system of schemes by the Planning Commission⁴³ and the NITI Aayog⁴⁴, but these efforts have concentrated on converging existing schemes and preventing replication, rather than providing comprehensive coverage against risks or income loss⁴⁵.

Third, many schemes are made by executive order, rather than by statute⁴⁶, and are frequently withdrawn and then modified and reinstated⁴⁷. While schemes such as the Ayushman Bharat Yojana and Atal Pension Yojana did provide for automatic migration from the older to the newer scheme, the changes in schemes were not always to the advantage of beneficiaries. The Atal Pension Yojana, for instance, does not make use of the network of aggregators under the Swavalamban scheme.

The present system of social security is fragmented across multiple agencies and entities. Different ministries and departments are responsible for different schemes, and many of the schemes have overlapping functions. The lack of ownership is further complicated by the burdensome process of enrolment. Presently, beneficiaries are required to register

⁴⁰Website of Ayushman Bharat Pradhan Mantri Jan Aarogya Yojana. URL: <https://pmjay.gov.in>

⁴¹Owen Smith, Di Dong, and Sheena Chhabra (2019a). *PM-JAY Across India's States: Need and Utilization*. URL: https://www.pmjay.gov.in/sites/default/files/2019-10/Policy%20Brief%202_Need%20and%20Utilization_Web.pdf; Owen Smith, Di Dong, and Sheena Chhabra (2019b). *PM-JAY And India's Aspirational districts*. URL: https://www.pmjay.gov.in/sites/default/files/2019-10/Policy%20Brief%203_PM-JAY%20and%20India%27s%20Aspirational%20Districts%20%28PRINT%29_WB.pdf

⁴²Aparajita Singh and Nishanth Kumar (2019). *The State of Social Pensions in India*. Dvara Research Blog. URL: <https://www.dvara.com/blog/2019/07/23/the-State-ofsocial-pensions-in-india/>

⁴³Planning Commission (2011). *Report of the Committee on Restructuring Centrally Sponsored Schemes (Chaturvedi Committee)*.

⁴⁴NITI Aayog. *Report of the Sub Group of Chief Ministers on the Rationalisation of Centrally Sponsored Schemes*. URL: <https://niti.gov.in/sites/default/files/2019-08/Final%20Report%20of%20the%20Sub-Group%20submitter%20to%20PM.pdf>

⁴⁵Aruna L. Sharma (2013). *Mainstreaming of Resource Convergence in Policymaking, Programme Design and Execution*. UNDP. URL: <https://www.undp.org/content/dam/india/docs/poverty/mainstreaming-of-resource-convergence-in-policy-making--programme.pdf>

⁴⁶The exceptions to this are the Mahatma Gandhi National Rural Employment Guarantee Act, 2005 and the National Food Security Act, 2013.

⁴⁷Anupama Kumar (2020). *Centrally Sponsored Schemes and Centre-State Relations*. Dvara Research Working Paper. URL: <https://www.dvara.com/research/wp-content/uploads/2020/08/Centrally-Sponsored-Schemes-and-Centre-state-Relations-A-Comment.pdf>

separately into each scheme⁴⁸. There have been some attempts to enable beneficiaries to register for schemes at the last mile, through CSCs and e-Seva Kendras⁴⁹. While these provide the important service of registration, the burden still remains on the beneficiary to determine which schemes they are eligible for, and to ensure that they meet the requirements of registration for them⁵⁰.

There is an urgent need for comprehensive and universal social security, comprising a set of robust floor-level statutory provisions to be made available to all persons in India. The availability of social security measures should not be dependent on a person's status as a worker or on the type of employment⁵¹. There is also a need for clarity on the content on the benefits available to workers in the unorganised sector. Presently, there is little guidance on the content of the social safety net for unorganised sector workers. The ILO Recommendation No. 202 provides some guidance on the content of a minimum social security floor – Clause 4 calls for member nations to provide universal social security, while Clause 9 refers to benefits including basic income security and access to a defined set of goods and services for all⁵².

At the very least, social security in India must provide for inflation-adjusted income security to those in the informal sector, as well as access to health, disability, maternity, sickness and death benefits⁵³. It is hoped that these measures will come into effect at the earliest.

⁴⁸Guy Standing and Renana Jhabvala (2010). *Targeting the Poor: Clogged Pipes and Bureaucratic Blinkers*. Economic and Political Weekly, 45(26). URL: <https://www.epw.in/journal/2010/26-27/special-articles/targeting-poor-clogged-pipes-and-bureaucratic-blinkers.html>

⁴⁹Anognya P and Aarushi Gupta (2020). *The Common Services Centre Model: A no-win scenario?* Dvara Research Blog. URL: <https://www.dvara.com/blog/2020/03/11/the-common-services-centre-model-a-no-win-scenario/>

⁵⁰It is noted that services such as Haqdarshak provide assistance to people attempting to navigate the process of identifying and registering for government benefits. See, Haqdarshak (n.d.) *Haqdarshak: What do we do?* URL: <https://haqdarshak.com/what-do-we-do>.

⁵¹Anupama Kumar (2020). *ibid*; Saurabh Bhattacharjee (2020). *Challenges to Social Security for Self-Employed Workers in India and the Code for Social Security Bill, 2019*. Dvara Research Blog. URL: <https://www.dvara.com/blog/2020/08/21/challenges-to-social-security-for-self-employed-workers-in-india-and-the-code-for-social-security-bill-2019/>

⁵²International Labour Organisation (2012). *Social Protection Floors Recommendation (No. 202)*. URL: https://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P12100_ILO_CODE:R202.

⁵³International Labour Organisation (1952). *Social Security (Minimum Standards) Convention (No. 102)*. URL: https://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO:12100_P12100_INSTRUMENT_ID:312247:NO

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