

Policy Brief No. 1

The Coronavirus Pandemic: Are we ready for the long haul?

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Highlights

In this brief, we lay out broad guidelines and make key recommendations to help policymakers in responding to the economic and health crisis arising out of the coronavirus pandemic. We do not consider responses specific to containing the spread of the virus; instead, we discuss ways in which an economic tragedy can be avoided during events like lockdowns. We pay specific attention to the costs faced by vulnerable groups and consider how policymakers can address their concerns in a timely and planned manner and minimize reactive policymaking.

- 1. During periods of lockdown, we recommend a monthly cash transfer to all households with ration cards of Rs 4300 in urban areas and Rs 2600 in rural areas (this estimate is for an average family size of four members). The existing payments infrastructure based on Aadhaar can be used to make transfers. Planning would be required to make sure that the cash transfer is accessible to recipients, and that the withdrawal of cash from banks and ATMs takes place in a streamlined manner. Banking correspondents and mobile banking vans could be used to make cash available to recipients in rural areas.
- 2. With 23 crore ration card holders and an average of four people per household, the total cost to cover the present 3 weeks of lockdown will come to approximately Rs. 55,000 crore.
- 3. Cash transfers should be complemented by continuing in-kind transfers through the PDS. The role of PDS shops needs to be expanded: in addition to cereals and pulses, vegetables like potatoes, onions and tomatoes which are essentials for Indian households should also be made available through fair price shops, if possible, at reduced rates. Wherever traveling to PDS shops is difficult (for example, during a strict lockdown), PDS trucks should be made available for doorstep delivery.
- 4. Government machinery, particularly the police, must be actively vigilant to prevent discrimination and ensure that relief, assistance and materials reach everyone, irrespective of their social identity, including caste, religion, or tribal status.
- 5. Steps must be taken to ensure the supply of essential commodities, particularly during a lockdown. A broader view must be taken of what constitutes "essential commodities", to be exempted from restrictions on movement, in order to ensure households can meet their daily needs, and to support farmer incomes.
- 6. A Pandemic Preparedness Unit should be created at the level of the central government. This will be responsible for:
 - i) streamlining disease surveillance and reporting systems,
 - ii) coordinating public health management and policy responses across all levels of government,
 - iii) formulating policies to mitigate economic and social costs, and
 - iv) communicating effectively about the health crisis.
- 7. In addition, policy should pay attention to specific groups that are more vulnerable to the economic costs of the pandemic than others, like migrant labour, daily wage earners, women and children, many of whom may struggle to get access to entitlements. We make specific proposals to address their concerns.

Section 1: Comprehensive Policy Framework

There is a lot that is unknown about SARS-COV-2, but the world's leading epidemiologists believe that its spread will be a long-drawn process. It will take at least 18 months for a vaccine to become available, and even after that, scaling up vaccine production to cover the entire world population will take a long time. Until then, or until a sufficient number of people become immune to the virus, we may see multiple outbreaks of the disease, leading to spikes in infections and mortality. Many experts also believe that SARS-COV-2 is seasonal, which could imply outbreaks of COVID-19 cases in winter.

In short, over the next two years, governments around the world will have to spend resources on stamping out repeated outbreaks of the disease, often by "locking down" cities, or regions, or entire countries. As we have seen in the few short days of national lockdown so far, these lockdowns come with significant economic costs and impose hardships on many vulnerable people. Policymakers must be prepared to mitigate the costs of lockdown and provide relief to adversely affected individuals. Moreover, they must be ready to announce these measures *in advance* of a lockdown to prevent the scenes of chaos, panic and anxiety that we have witnessed over the last few days.

Guiding principles for policy responses

One of the defining aspects of the global pandemic is the fundamental uncertainty associated with it. Both common sense and experimental evidence establishes that almost all people are averse to facing uncertainty in their lives. One important principle that government policy should follow is to not add further uncertainty in these difficult times. There must be a pre-established, forward-looking policy framework in place that *commits* to providing a safety net to vulnerable people. This should be widely publicised so that the people affected most know what their entitlements are and how to access them.

Policy needs to take a comprehensive view of the vulnerabilities, both material and psychological, that vast sections of the population will be exposed to in the event of repeated lockdowns. Migrants, daily-wage workers, casual labourers, informal sector workers, and many self-employed individuals who do not have any safety net in the form of substantial personal

savings will face a sharp drop in incomes potentially leading to hunger, homelessness, and adverse health outcomes. As debilitating as the material consequences of scarcity are, equally striking are the psychological damages that it produces. Specifically, episodes of scarcity have a serious impact on cognition and decision making, leading to adverse outcomes for vulnerable groups (Mullainathan and Shafir, 2013).:

With this in mind, we propose a comprehensive approach that argues for a combination of in-kind transfers and cash support to be provided to all households with ration cards during any lockdown that takes place over the next 24 months. Given the possibility of prolonged and frequent lockdowns in the future, our proposed transfers are more ambitious than the announced government measures that are in place. We think this is important in order to provide an adequate safety net for millions of Indians who do not have the savings to tide themselves through long periods of economic inactivity.

It is important for the cash and in-kind transfers to work as complements and not as substitutes. Lockdowns are often accompanied by hoarding, disruptions in supply chains and price fluctuations, which can erode the value of any cash transfer. In order to ensure that these transfers actually provide relief to people, we also emphasise the importance of strengthening the Public Distribution System (PDS) and managing supply chains to maintain the flow of essential commodities.

The implementation of these policies requires coordination across multiple levels of government. We recommend that a robust institutional infrastructure be put in place in order to manage government responses, not just to the current pandemic but to any future pandemics.

In addition, policy should pay attention to specific groups that are more vulnerable to the economic costs of lockdown than others, like women and children, migrant labour, daily wage earners and self-employed workers, many of whom may struggle to get access to entitlements.

Creating a social safety net

Given long-term uncertainty, likely recurrences of SARS-COV-2 outbreaks and lockdowns, and the significant material and psychological costs associated with them, we recommend a monthly cash transfer to all households in areas that have been locked down, to be supported by in-kind transfers of food and other essential commodities through the PDS system.

Cash transfers:

- 1. During periods of lockdown, we recommend a monthly cash transfer to all households with ration cards in the area of the lockdown. We are, of course, aware that any recommendation of a monthly cash transfer will run into questions about what the right amount for the monthly transfer is. We suggest that this amount should vary with the size of the household, and for a household of four, our suggestion (based on poverty line calculations) is a monthly transfer of Rs 4,300 in urban areas and Rs 2,600 in rural areas. Is this number too high? We think not. In the calculations below, we show that if the transfer were calculated based on lost earnings from the lockdown, the amount would be much higher.
- 2. Since Aadhaar cards have been seeded with both ration cards and bank accounts, these transfers can be made directly into bank accounts linked to each ration card. To address the concern that the use of the ration card and Aadhaar card may lead to some exclusions of households who possess neither, governments must take steps to address payments claims from individuals who have not been able to access their entitlements. A helpline can be set up to facilitate the processing of claims, and these should be resolved as soon as possible. In rural areas, gram panchayats should be given the responsibility to process claims by people who do not have necessary documentation. The sarpanch could be made responsible for compiling a list of excluded individuals to whom cash will be home-delivered by the banking correspondents.
- 3. In addition to transferring money into bank accounts, steps should be taken to ensure that people have access to cash. To prevent overcrowding at banks and ATMs in urban areas, simple rules based on Aadhar card numbers could be used to allow people to withdraw money. In rural areas, banking correspondents or mobile banking vans could be used to bring cash to each village every month. Since biometric authentication may be risky during this time, specific steps should be taken to work around this requirement. For example, the banking correspondent can first authenticate the identity of a person by verifying their photo identity card (such as the voter id card), and then taking a photograph of the Aadhaar card before giving out the cash. The banking correspondent can process the transaction later at the bank with the Aadhar card details of the beneficiaries.
- 4. With 23 crore ration card holders and an average household size of four, the total cost to cover the present 3 weeks of lockdown will come to approximately Rs. 55,000 crore or about one-tenth of the fiscal deficit (at 3.5% of GDP). The proposed transfer will widen

the deficit by 0.3 percentage points to 3.8% of GDP. Of course, given the complete shutdown of production, the tax collection for this period would be adversely affected which will only widen the deficit. Financing this transfer through any sources, be it direct or indirect taxes, trade or domestic and international borrowing, will certainly be challenging, but these costs are dwarfed by the costs of a full-blown pandemic. We believe that a nominal transfer that helps the poor for a very short period of time and forces them back into work in infectious environments will entail much higher long-term costs than a more generous transfer that allows people to safely stay at home, contains the spread of disease, and lowers the number of sick-persons-work days in the economy.

- 5. If lockdowns cover only specific states or districts, cash transfers should extend to households living and working in all the affected areas. As an example, if the state of Delhi was to be locked down for a month, transfers of Rs 4,300 would be made to all 19 lakh households holding ration cards, at a total cost of Rs 817 crores for the month.
- 6. The availability of the cash transfer should be announced in advance to reduce economic uncertainty during this pandemic.

There are multiple approaches to calculating the cash transfer amount. While our recommendation is based on the poverty line set by the Rangarajan Committee, here we alternatively consider lost earnings as a measure of financial distress, since many daily wage workers, particularly in urban areas, will not be able to work during a lockdown. The NREGA minimum wage in rural areas is Rs 202 per day and for urban areas we adjust this minimum rural wage upwards since average casual worker wages in urban areas are approximately 25% higher than rural wages (PLFS 2017-18). The corresponding urban wage then is Rs 251 per day. Given female labour force participation rates of 20% in urban areas and 25% in rural areas, and assuming one male earning member in each household, we get monthly household incomes for a typical family of four of Rs 7,220 in urban areas and Rs 6,060 in rural areas. If we deduct the monetised value of the recently announced additional rations to be provided through the PDS (20 kg cereals at an average market rate of Rs 32 per kg, based on retail price data from the Department of Consumer Affairs), we arrive at a cash transfer of approximately Rs 5,400 per urban household and Rs 4,200 per rural household. If we were to use the average earnings of daily wage workers rather than the minimum wages, the transfer figure would be even higher.

- 1. The cash transfers should also be supported by in-kind transfers of cereals, pulses, and other essential commodities. During a lockdown, people find it difficult to access cash at banks or ATMs, and supply chains are disrupted, causing prices of essential goods to rise. The government has already announced increased transfers of free rations of cereals and pulses to households through the PDS system for the next three months. We support these measures and recommend that they be continued in the event of further lockdowns. Biometric authentication, however, may pose an increased risk during this period and should be suspended if appropriate, as many states have already done.
- 2. Since people, particularly the elderly, might find it difficult to travel to PDS shops during periods of lockdown, in-kind transfers can also be made through other means like doorstep delivery through PDS trucks.
- 3. The role of PDS shops needs to be reimagined. In addition to cereals and pulses, vegetables like potatoes, onions, tomatoes and salt which are essentials for Indian households, should also be made available through these fair price shops at reduced rates, if possible.
- 4. In the event of more frequent and prolonged lockdowns, the list of essential goods required to run households will need to be expanded. To mitigate policy uncertainty, a comprehensive list of essential commodities needs to be drawn up that includes all goods necessary for running households (for example, looking beyond food to other requirements such as electrical and plumbing parts, and packaged food).

Supporting the supply of essential goods

The provision of cash and in-kind transfers needs to be complemented with the maintenance of adequate supplies of essential goods like food and medicines. Supply chains in India are long and non-automated. They aggregate the produce from farms up to a wholesale market and then disaggregate it to small local vendors. First, these markets themselves are prone to becoming potential places of virus transmission. Second, lockdowns can affect both the aggregation up to the mandi, and further distribution from the mandis.

The reported incidents of shops, vegetable and fruit kiosks running out of supplies, and e-commerce disruptions in the aftermath of the current lockdown offer valuable lessons in planning for the future. Uncertainty about the nature of the lockdown and the exceptions to the lockdown have led to hoarding and a rise in prices of some perishables and a fall in the price of

others. Figure 1 plots the average retail prices during the month of March 2020 for some of the essential commodities used by Indian households - Tomato, Onion, Potato, Cereals, Pulses, Oils and Sugar. Three commodities - Tomato, Onion and Potato (TOP) – had a sharp spike in their prices immediately after the lockdown was announced. These commodities are perishable/semi-perishable, used frequently by Indian households and are purchased in local markets, with daily variation in prices. Other commodity prices have not shown a spike yet largely because they are non-perishable and have greater price stability due to their availability in packaged form, where prices do not change frequently. If supply chains are not managed well, there is a possibility of sharp spikes in other commodity prices too, especially of those commodities regularly consumed by households. The benefit of cash transfers will be significantly eroded in such an environment.

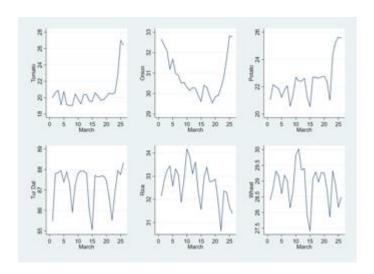


Figure 1: Prices of Essential Food Items (Department of Consumer Affairs, authors' calculations across 75 cities)

- 1. The current model of aggregated mandis needs to be reshaped with trucks arriving at various smaller multiple sites to offload supplies. There could be mandated restrictions on the number of trucks allowed at a site to avoid overcrowding. SMS based preregistration used in Madhya Pradesh can be used as a model countrywide to plan for the arrivals at these sites. The COVID-19 testing protocol should be expanded to include workers involved in the supply of essential goods, who are at a high risk of contracting the virus and must be regularly tested to minimise community transmission.
- 2. The movement of goods from farms to mandis must also be allowed to continue freely. Currently only the movement of "essential" goods is permitted, but a very narrow listing

- of "essential" goods will only lead to farmer incomes falling and a subsequent shortage in supplies. Movement of all agricultural products should be freely allowed to prevent future shortages in goods.
- 3. The pressing need to ensure that mandis continue to function has already been emphasised elsewhere. It is particularly important to put in place procurement plans for the rabi crop which will be harvested in early April, to protect farmers' incomes and to prevent food stocks from running out. In the event of further lockdowns, seeds and fertilisers for next kharif season also need to be made available to farmers. Others have also proposed opening credit lines to traders and buyers and ensuring that non-payment of Agricultural Produce Market Committees fees do not impede the smooth functioning of supply chains.
- 4. To ensure that supplies continue to be maintained, we need planning and coordination across states. Districts where supplies are running out need to be identified and stocked up to avoid panic.
- 5. In the immediate aftermath of the current lockdown, there will be a shortage of packaged food manufactured by agri-processing industries, including a wide range of products from oils to health and hygiene goods. The government will need to be proactive and ensure that these manufacturing units are allowed to operate before scarcity settles in. For these manufacturing units there can be an issuance of letters by employers who need to operate their businesses as part of essential supply chain continuance. This should be allowed as sufficient proof to allow movement of their employees.

Building institutional infrastructure to respond to future outbreaks of disease

Implementing the recommendations will require a robust institutional framework to allow for coordination between central and state governments. We propose that the central government constitute an apex body at the national level - a Pandemic Preparedness Unit - headed by the Prime Minister which will coordinate government responses to outbreaks of COVID-19. We propose that the Unit should have dedicated offices that focus on the following issues, among others:

- 1. Streamlining disease surveillance and reporting systems: our existing system of collecting data on and monitoring disease outbreaks needs strengthening and streamlining, such that reliable and updated information is available in a central repository for quick action.
- 2. Coordinating public health management responses: we need to plan for how hospitals and medical equipment production and supply chains can be coordinated to respond to a pandemic and the unit can perform this task.
- 3. Formulating economic and social policies: it is evident that any pandemic with associated lockdown periods imposes significant economic and social costs on the Indian population. Therefore, we need experts in the unit who can formulate robust policies that account for such scenarios and work on mitigating these costs.
- 4. Coordinating with states: The unit can also work as a central coordinating agency at the time of a pandemic to guard against possible coordination failures across states, such as allowing transport of essential commodities across state borders, facilitating safe transport for migrants, etc.
- 5. Communicating effectively: it is crucial for the government to clearly communicate information about the disease as well as recommended behavioural responses, do's and don'ts, etc. Government must also be clear and explicit about restrictions relating to lockdowns, as well as exemptions. The unit can be the central authority for effective communication on such issues at the time of a crisis.

Given the size of our nation, it may be advisable to form similar Pandemic Preparedness Units at the state level headed by the respective Chief Ministers that coordinate with the central Unit and help in management and communication of policies across districts within each state. The central government should also strengthen decision-making and governance at local levels, by transferring contingency funds to gram panchayats so as to build a streamlined reporting system.

Section 2: Impacts of the pandemic on vulnerable populations

In this section, we discuss the economic impact of the current crisis on particularly vulnerable groups. We identify five salient groups who are vulnerable to the economic and health shocks

arising from SARS-COV-2: children, women, migrants, daily wage earners, and self-employed individuals. For each of the groups, we identify the regions where relief effort needs to be concentrated and discuss how to formulate policies to assist them. We also discuss the economic effects of lockdowns on salaried workers: while they are seen to be less vulnerable, some of them (such as factory workers and other blue-collar workers) may face significant economic hardship from extended lockdowns.

Children

Early childhood malnutrition is a rampant health problem in India, manifested in low height-forage (stunting), low weight-for-age (underweight) and low weight-for-height (wasting). There is clear evidence from several parts of the world that early childhood malnutrition has lasting impacts on individuals throughout their life course. Malnourished children are more likely to have lower learning capacity, lower productivity, higher morbidity, and greater risk of non-communicable diseases, after accounting for all other risk factors.

India is home to more than a third of all stunted children in the world, and 38 percent of all children between 0-5 years were stunted in 2015-16, according to figures from the National Family and Health Survey. This is already a public health crisis of giant proportions. Under conditions of a pandemic and a lockdown, these children are not only themselves more vulnerable to the disease, but also to a worsening of their malnutrition status (due to the loss of their parent's livelihoods, and the reduced availability of food and medical resources), both of which have adverse implications for their lives lasting well into their adulthood.

There are also significant caste gaps in the prevalence of stunting. In 2015-16, 32 percent of Hindu upper caste children were stunted, compared to 45 percent of SC-ST children and 39 percent of OBC children. Calculations based on longitudinal dataiv reveal that children who were stunted at the age of 1 year are more likely to be stunted at age 15 (Deshpande and Ramachandran 2020). Children who are stunted at age 1 also have persistently lower learning outcomes later in school, relative to children who were not stunted at age 1. Given that SC-ST children are significantly more likely to be stunted, and likely to remain stunted, the adverse consequences on their lives would be that much more severe.

The provision of a social safety net through cash and in-kind transfers can go a long way in mitigating the effects of negative shocks in early childhood (Dasgupta 2017). We support recommendations that have already been made that the government tap into its network of

anganwadi and ASHA workers to deliver school meals to children at their homes during lockdowns involving school closures, particularly through the disbursement of dry rations (such as rice, pulses, eggs), ready-to-eat food packets, fruits and nuts. The anganwadi workers already have a mechanism of delivering take home ration for pregnant and lactating mothers and for very young children. This could be extended to include preschool-aged children and midday meal beneficiaries and also the amount of take-home ration could be increased.

In doing so, the health of the anganwadi workers should be prioritized. Proper masks and sanitizers should be disbursed to these health workers with full payment for their services. It is important for the government to realize that these healthcare personnel belong to the high-risk category for contracting and spreading the disease from close contact with patients. The frontline health workers should be given the recommended protective gears to ensure both their safety and that of the people they are dealing with which can vastly improve their efficacy on the ground.

Women

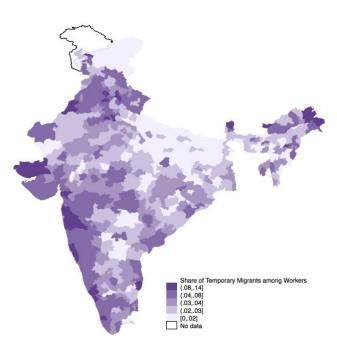
A major concern during this lockdown is access to contraceptives and family planning products due to the initial shutting down of their manufacturing units and the reduced presence of health workers. Previous research has found that natural disasters have led to significant increases in childbirth rates and reduced spacing between successive births, particularly for uneducated women (Nandi et al 2018).vi This may lead to significant demographic challenges such as reduced investments in children, particularly girls. The role of the social safety net is critical in ensuring that the cost of this crisis does not fall disproportionately on women. Additionally, government should minimize disruptions in reproductive health care, build inventories of contraceptives, ensure access to sanitary products, and offer counselling and support for reproductive health care needs through the continued presence of health workers on the ground.

Another horrific impact of the lockdown has been a rise in domestic and intimate partner violence in the US, the UK and China, among other countries, increasing the risks to women's lives. The first step is for administration and law enforcement agencies to recognize the gravity of the problem, to listen to women and to sympathize with them. At this time, more than at any other time, women need assurance that they will be heard, and that help will be sent if they fear for their or their children's lives. Reaching women in distress needs to be classified as an essential

service. The police will have to be told in the strictest terms that they have to respond to distress calls from women, regardless of their class, caste or religion.

Migrant Workers

The media has justifiably spent considerable attention on migrant workers and how this group is specifically vulnerable to the crisis. In light of this, it is important to reflect on the number of



migrant workers and their geographic concentration, so that relief efforts focusing on this group can be better designed and targeted. According to Census 2011 data, about 4.1 crore individuals or about 8.5% of the total workers population of are migrant workers.vii Some are temporary migrants (roughly 3.5% of all workers) who are especially vulnerable to the crisis, since they live away from home and are mostly engaged in informal sector work. We focus on temporary migrants, as opposed to

permanent migrants, who are living at their usual homes.viii

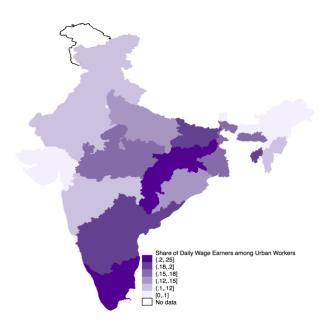
To help identify the regions of the country with high concentration of temporary workers we plot the proportion of such workers across districts using a heat map. We believe the spatial pattern of the proportions as depicted in the figure would be very close to what it is today. We find that most of the temporary migrant workers are located in the western and south-western coastal districts and some districts in in Haryana, Punjab and Himachal Pradesh.

It is especially hard to provide assistance to this group since they face both a liquidity crisis as well as higher prices of essential commodities due to supply chain disruptions. Even though they can in principle access the central government portion of their PDS rations from the fair price shops at their location of work, these individuals often do not carry their ration cards with them. Therefore, though our proposed policy of cash transfer may help them with liquidity, they may still not have adequate access to essential items. To ensure adequate access to food, the states should arrange for community kitchens, especially in the districts with large populations of

migrant workers. There is also room for some creative solutions with respect to this issue. Kerala, for example, is trying to home deliver food to quarantined people. This can be specifically arranged for the migrant population as well. Moreover, public buildings such as indoor stadia, school buildings, etc., can be used to provide them shelter during lockdown. Further, many migrant workers who work in small factories or in the gig economy (drivers in app-based cab services etc) face uncertainty about when their work will resume after the lockdown is over. Consequently, they may prefer to travel back home. Arranging for their safe transport would be an essential task of state governments. Evidently, it is important to identify the possible solutions that fit the context of a state and organizational capacities of its government, *prior* to future outbreaks so that explicit announcements can be made in advance before panic sets in. Our proposed Pandemic Preparedness Unit can devote their attention on this to avoid chaos at the time of need.

Daily wage earners

The population of casual laborers who earn daily wages constitute another related, but distinct



category of vulnerable people. During lockdown they are hit the hardest as their livelihood gets immediately disrupted. A significant proportion of workers in India belong to this category. We use the PLFS survey in 2017-18 to calculate the proportions of daily wagers in urban and rural areas separately. The share of casual laborers who earn daily wages in the working population is 14.5% in urban areas and 29% in rural areas. We are especially concerned with daily wagers in urban areas, many of whom work on construction sites, and are

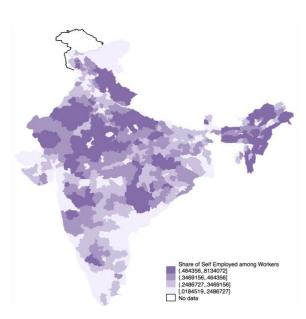
engaged in other unskilled or semi-skilled activities, and who face immediate unemployment. Additionally, the effect of inflation in essential commodity prices would be much larger on them as compared to their counterparts in rural areas due to supply chain disruptions.

We show the geographic variation at the state level of the proportion of daily wagers in the urban area in the accompanying figure.x We find that Southern states and Chhattisgarh have

relatively high shares of daily wage earners in the urban area. These states especially need to be mindful of the welfare of this group. Our proposal of cash transfer along with provision of essentials through PDS would be an important step in mitigating their distress during the lockdown.

Self-employed individuals

Self-employed individuals, including farmers and individuals engaging in household production



or retail services, constitute another large segment of our working population who face uncertainty at this time of lockdown. According to Census 2011, about 30% of workers are self-employed. The accompanying figure plots the proportion of self-employed individuals across districts of India, identifying those districts where this group of workers are concentrated. We find that many districts in the north eastern states of India, Punjab, Uttarakhand, Himachal Pradesh, and Uttar Pradesh have large self-employed populations.

The policy response for this group of people should be similar to the one for daily wage laborers. Additionally, the government should consider waiving rental payments for retail shops in locked down areas. For the farmers, we should ensure that agricultural production should not get disrupted and they are able to source their necessary inputs.

Salaried workers

Regular/salaried workers constitute around 18.5% of the workforce.xi They are more skilled and earn roughly double the wages of casual or self-employed workers. Two-thirds of regular/salaried workers are employed in services and almost three-quarters are concentrated in urban areas (about 75%).

The government recently announced that it would make additional contributions to employee provident funds and allow for early withdrawals; while this can ease life for salaried workers over the next 1-3 months, it will be insufficient in the long run. Globally firms have already started cutting wages for workers – such as Qantas, Indigo, Koovs, Oyo to name a few. The Indian government has asked firms to not lay off workers, but cost management practices within firms may be the deciding factor. The hope is that CEOs and higher ranked professionals take pay cuts before passing them down to lower wage employees.

The Korean and Chinese pandemic experience highlights differential effects of layoffs across sectors. Essential services such as medical services, utilities, logistics, ICT services, banking, public administration and defense, and essential goods production such as agriculture, power, medical equipment have remained functional. Some other goods and services have adaptable production processes, which can transition to online-delivery, such as educational services. These sectors would be able to tide through with some short-term investments in technology and skilling. The remaining sectors such as mining, some manufacturing sub-sectors (such as clothing, automobile, furniture, to name a few), construction, personal services, trade would be adversely affected in the short to long run. Control of the coronavirus pandemic requires minimum human contact, hence the demand as well as supply of these goods and services would be low. This implies that workers whether regular/salaried or casual or self-employed would have different experiences depending on the sector in which they are engaged in.

In short, the pandemic will have severe effects on vulnerable groups. In this time, we should not let go of our humanity, and ensure that policies are addressed towards alleviating further suffering.

i Mullainathan, Sendhil, and Eldar Shafir. Scarcity: Why having too little means so much. Macmillan, 2013.

ii This data is collected by the Department of Consumer Affairs (DCA), and is plotted by taking an average across 75 cities

iii Data for other perishable commodities is not collected by DCA but it is quite possible that they witnessed an increase too.

iv Deshpande, Ashwini and Rajesh Ramachandran, 2020. "Which Indian Children are Short and Why? Social Identity, Childhood Malnutrition and Cognitive Outcomes", Ashoka Economics Discussion Paper Series.

v Dasgupta, Aparajita (2017) "Can the major public works policy buffer negative shocks in early childhood? Evidence from Andhra Pradesh, India." *Economic Development and Cultural Change* 65, no. 4: 767-804.

vi Nandi, A., Mazumdar, S. & Behrman, J.R. The effect of natural disaster on fertility, birth spacing, and child sex ratio: evidence from a major earthquake in India. *J Popul Econ* 31, 267–293 (2018). https://doi.org/10.1007/s00148-017-0659-7

vii This is different from the number of total migrants in India, which is 45 crore, as quoted in the media. However, not all migrants migrate for the purposes of work. For example, about 21 crore migrated due to marriage. We, therefore, focus on only those migrants who report "work or employment" as their reason for migration in our figure from Census 2011. We refer to them as migrant workers.

viiiWe classify migrant workers in a district as temporary if they moved to the place of enumeration from their previous residence less than a year ago.

- ix We use PLFS survey data for this because the Census doesn't contain information about daily wage workers.
- x We do not show district level variations in the graph because the numbers are calculated using a survey data and not the census. Therefore, the estimates of the proportion at the district level come with relatively high degree of sampling uncertainty. The state level estimates are more stable in that regard.
- xi Estimates based on NSSO's 2011-12 Employment and Unemployment Survey, as quoted in ILO's India Wage Report (2018)