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INDIA'S LOCKDOWN:
AN INTERIM REPORT

Debraj Ray
S. Subramanian

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ABSTRACT

We provide an interim report on the Indian lockdown provoked by the covid-19 pandemic. The main topics — ranging from the philosophy of lockdown to the provision of relief measures — transcend the Indian case. A recurrent theme is the enormous visibility of covid-19 deaths worldwide, with Governments everywhere propelled to respect this visibility, developing countries perhaps even more so. In advanced economies, the cost of achieving this reduction in visible deaths is “merely” a dramatic reduction in overall economic activity, coupled with far-reaching measures to compensate those who bear such losses. But for India, a developing country with great sectoral and occupational vulnerabilities, this dramatic reduction is more than economic: it means lives lost. These lost lives, through violence, starvation, indebtedness and extreme stress (both psychological and physiological) are invisible. It is this conjunction of visibility and invisibility that drives the Indian response. The lockdown meets all international standards so far; the relief package none.

Debraj Ray
Department of Economics
New York University
19 West Fourth Street
New York, NY 10003
and University of Warwick
and also NBER
debraj.ray@nyu.edu

S. Subramanian
Independent Researcher
36-H, North Parade Road
St Thomas's Mount
Chennai, TN 600016
India
ssubramanianecon@gmail.com

An Interim Report on India's Lockdown[†]

Debraj Ray and S. Subramanian[‡]

May 20, 2020

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1. The Lockdown

On January 30, 2020, a brief press release issued by the Ministry of Health and Family Welfare in India read:

“One positive case of novel coronavirus patient, of a student studying in Wuhan University, has been reported in Kerala. The patient has tested positive for novel

[†]This report is based on a longer version by the same authors, available at <https://debrajray.com/wp-content/uploads/2020/05/RaySubramanian.pdf>. We thank Bishnupriya Gupta, Rajeswari Sengupta, Lore Vandewalle and especially James Poterba for helpful comments. Ray acknowledges funding under National Science Foundation grant SES-1851758.

[‡]Ray: New York University and University of Warwick, debraj.ray@nyu.edu. Subramanian: Independent researcher, ssubramanianecon@gmail.com.

coronavirus and is in isolation in the hospital. The patient is stable and is being closely monitored."

By February 3, this had risen to three cases, all students at Wuhan University. An ominous silence then prevailed for all of February, until March 4 when a further 22 cases came to light. It took till March 6th for the Ministry of Health and Family Welfare to launch its covid-19 awareness program (see Somdeep Sen's report [69] on the timeline leading to the lockdown announcement). Matters moved quickly after that, as the infection moved into community transmission: by mid-March there were over a hundred confirmed cases, and over 1000 by the end of March. Countries all over the world were moving into lockdown. On March 11, the World Health Organization stated that covid-19 represented a global pandemic. The pressure was on.

The Indian government appeared to be located, to put it baldly, between a rock and a hard place. The preceding months and weeks had been far from placid. The Citizenship Amendment Act, which sought to grant citizenship to all refugees of non-Muslim origin from Pakistan, Bangladesh and Afghanistan, had met with sustained protest around the country. The Act and the groundswell of response had generated recurrent tensions. One of these protest sites was threatened by a Hindu nationalist BJP leader and subsequently attacked, leading to communal riots in Delhi starting February 23 that left 53 people dead, of whom more than two-thirds were Muslims. These riots coincided, perhaps not coincidentally, with Donald Trump's visit to India on February 24th-25th. Most recently, on March 16, the Congress Government had lost its majority in the state of Madhya Pradesh, and the BJP was about to install a government in that state (on March 23rd).

So India was behind the curve. To be scrupulously fair, it wasn't far behind the responses of many Western countries, but that is neither here nor there. Kerala, with its recent history of dealing with the Nipah outbreak, had already been getting its act together. In a report [56] filed on March 29th, the columnist Supriya Nair writes: "Since February, opposition politicians have been warning of the

approaching risks. The southern state of Kerala, the first to start widespread testing and quarantine measures, has prevented uncontrolled outbreak within its borders for several weeks." In an interview [91] with Karan Thapar for *The Wire* on March 19th, the epidemiologist Ramanan Laxminarayan, Director of the Center for Disease Dynamics, Economics and Policy in Washington, D. C., "... disagree[d] with the Indian Council of Medical Research's official stand that India is still in Stage 2 of the epidemic and has not entered Stage 3 [community transmission]."

A morning-to-evening 14-hour "Janata Curfew" — a Curfew of the People — was announced for March 22nd, at the end of which, at 9 p.m., people were invited to assemble on their balconies and together bang their pots and pans as a gesture of appreciation for functionaries involved in running essential services. This preceded a full lockdown that was announced on March 24th for a period of 3 weeks, till April 14th. On April 14th, the lockdown was extended for another 19 days, till May 3rd, and then extended again till May 18, with provision for relaxation of the shutdown for selected agricultural businesses, cargo transportation and sale of farming supplies, from April 20th, in those areas of the country in which the infection was perceived to have been contained. (At the time of writing, a further extension of the lockdown appears to be extremely likely.) On April 16th, the government resorted to a three-fold classification of districts — the so-called red zones assessed as hotspots with quick case-doubling times, orange zones which were assessed as having some infection, and green zones which were assessed as being free of infection in the last 21 days.¹ Activities such as personal travel by rail, air or metro (with some exceptions), hospitality services such as restaurants, schools and colleges, cinema halls and sports complexes, and large gatherings are prohibited in all zones. Some manufacturing and industrial activities remain open in all zones. Then there are gradations that depend on the particular zone.

¹Government of India information; https://static.mygov.in/rest/s3fs-public/mygov_158884465251307401.pdf.

According to some views, the government's abrupt declaration of a lockdown without a gradual leading up to it was perhaps a symptom of panic under pressure. Vivek Menezes [52] describes the moment in an "Opinion" piece for *The Guardian* written on April 8th:

"At 8 pm on 24 March, Prime Minister Narendra Modi announced that India would shut down in four hours. As he spoke, chaos erupted. Panicked mobs besieged the shops. Then, as buses and trains were cancelled, millions of migrant workers took to the roads on foot, streaming towards home in scenes that recall the partition photographs of Margaret Bourke-White."

After weeks of dithering, India had just been served with four hours of notice. In contrast, the government did nothing for all of February by way of testing, tracing and quarantining. A Kerala-type preliminary operation would have prepared the ground for a much mellower transition to lockdown.

For many citizens, the Prime Minister's announcements were frustratingly short on detail with respect to concrete steps that would be taken by the government to alleviate distress during the lockdown: a report by *The Wire* [86] on the announcement made on March 24th states: "The lack of details in Modi's speech . . . resulted in an almost nationwide spike in panic . . . As soon as the speech ended, neighbourhoods and markets across the country saw a sudden rise in traffic and footfalls as people rushed to stock up on supplies, with concerns about social distancing — the goal of the lockdown in the first place — temporarily being ignored." There were similar reactions to the lockdown extensions. An April 14th report [82] by *The Scroll* on the lockdown-extension announcement observes: "Several Twitter users were indignant about Modi failing to make any mention of plans to rejuvenate a falling economy, help the poor, or boost India's attempts to fight the novel coronavirus."

But as the lockdown settled, the cessation of normal activity was remarkably comprehensive. In the initial phase, apart from essential services (principally banks, ATMs, petrol bunks and emergency services), and shops selling or home-delivering medicines and food, vegetables and dairy products, other services

and activities were stopped . In fact, the police enforced the shutdown with a surprising excess of enthusiasm: to begin with, even “essential commodities” could not be transported through the supply chain, as both agricultural *mandis* and urban distribution points for food items were shut down in several states. The lockdown decree *did* allow for the movement of essential commodities, but as Sudha Narayanan has observed, “the word ‘essential’ comes from the Essential Commodities Act, [and] there is no good reason to expect . . . the police to know what these are”[58]. Since April 20, there has been some easing as described above. We will return to supply chains in Section 6.3.

In summary, a mammoth population of 1.3 billion people has been restricted to their homes, and transport services, schools, factories and business establishments have been closed. This state of affairs will continue into the proximate future. If nothing else — though we will need to see what else — this in itself is an achievement (if that word can be employed neutrally), the implementation of which could not have been foreseen.

2. The Philosophy of Lockdown

India’s lockdown is an instance of the dominant global policy response to the covid-19 pandemic. It entails the observance of physical distancing and isolation in a context of widespread suspension of normal human mobility and economic activity. With some exceptions in severity (such as Sweden where the government has been reluctant to impose measures other than guidelines, or Belarus, where there don’t seem to be guidelines either), this is very much the model that has been adopted by economically advanced European, North American and English-speaking countries like Australia and New Zealand. Indeed, India’s lockdown, now to run for an overall two months and more at the time of writing, is a prime example of the global approach, and the stringency of its implementation is reputedly unsurpassed by the record of any other country.

The normative philosophy for any policy is a social externality relative to some welfare objective. By this criterion, the core externality underlying an epidemic

is obvious — individuals will generally underemphasize the negative contagion that their actions impose on others. But ours is not an exercise in welfare economics: rather, we seek to understand the *positive*, not normative, philosophy underlying the response to the epidemic. The externality notion is also useful in this context, but we additionally need to ask: an externality relative to *which* viewpoint or welfare function?

The dominant policy response has been dictated by a largely epidemiological view of the problem. This is hardly surprising as the medical profession has been at the vanguard of those advising governments on the matter. A standard epidemiological model is pretty mechanical. An interactive stochastic process takes individuals through “states”: susceptible, infected, recovered, and so on. An array of parameters that govern contagion, fatality, recovery, or re-infection can be fed into these equations, which can then be solved (sometimes analytically, more often numerically) to generate estimates of a time path of infections and fatalities. Because this baseline model is devoid of behavioral responses, an enormous externality is present, by definition.

This reliance on mechanical “parameters” is easy to criticize. Every behavioral social scientist would know that even without a government to urge them along, individuals will react to an epidemic, adjusting their own behavior to avoid infection—at the very least out of narrow self-interest. The extent to which they react will, in turn, influence the “parameters” of the model, thereby generating non-linear responses that will go some way towards “flattening the curve” on its own. That said, this more sophisticated variant of the epidemiological policy view would still say that spontaneous reactions are still not enough, and intervention is needed. Even the modified behavioral models would not necessarily yield socially optimal outcomes.²

²There has been a veritable epidemic of papers on behavioral models of epidemiology, some more explicit than others in modeling individual responses, and all studying optimal lockdowns under various scenarios. For a tiny sample, see (pre-pandemic) Geoffard and Philipson [29], Fenichel [25] and Fenichel *et al* [26], and (post-pandemic) Farboodi, Jarosch and Shimer [24], Garibaldi, Moen, and Pissarides [28], and Jones, Philippon and Venkateswaran [43].

The lockdown response is further bolstered by the fact that organized services form a large share of the occupational structure of economically advanced societies, so there is substantial scope to move work activities online. If we factor in the demographic age distribution in these societies, and the concentration of resources and lobbying power in the upper reaches of that age distribution, it is not hard to see why the epidemiological view has come to dominate the debate, though not without substantial opposition. That opposition comes from a motley crew of interest groups. There are libertarians, mask-spurners and freedom junkies whose only goal is to exercise their right to free choice without heed to the consequences of their actions. There are religious groupings of all stripes who feel that human injunctions to fight the coronavirus are powerless — or unnecessary, or worse, a heresy — in the shadow of an omniscient God. And there are immensely powerful corporate and business interests, which not only feed off the freedom-loving/god-fearing/libertarian mishmash, but also inject the more insidious (and yet more serious) argument that the price of life has its limits, and that human souls can be placed on the same weighing scale as goods and services, *at some possibly large but finite price.*

Support for the lockdown is therefore seen as emanating from those who are high-minded enough to understand that life must be valued above commodities, those who understand the need for regulation to combat unwanted externalities. In contrast, those who would leave their societies unregulated are viewed with emotions ranging from amused contempt to outright suspicion and high outrage. It is a bit of a caricature, but only a bit, that support for the lockdown is associated with being “left,” or “progressive,” while those in favor of rapid relaxation are associated with being to the “right,” or “individual-choice-oriented.”

There is just one uncomfortable hole in the above seemingly tidy argument. It is that the motley crew of libertarians and capitalists are beginning to be joined by an increasingly desperate and vocal working class who live in unceasing fear of their livelihoods never returning. For this reason and others, a nuanced reading of these contrasting philosophies reveals doubts: doubts that are significantly heightened as we switch our focus to developing countries. While welfare

economics is conducted in the pristine glow of a single, undisputed objective function, positive political economy is not: *whose* welfare is often a far more important question than the textbook criteria of market failures relative to some universally accepted social welfare function.

3. Lives Versus Lives: The Visible and the Invisible

The covid-19 pandemic has created a laser focus on lives lost from the virus. No other epidemic in living memory has done this in economically advanced societies, with the possible exception of HIV-AIDS. Not Ebola, nor SARS, not MERS, not even the H1N1 pandemic has generated this level of red alert; and certainly not malaria or dengue, those stalwart relics safely locked away in the developing world. It isn't that these advanced societies haven't had first-hand experiences in some of these epidemics. But SARS-CoV-2 is different—it comes with a combination of contagiousness and fatality risk that has now taken over a quarter of a million lives worldwide, and this time the developed world accounts for the vast bulk of these deaths. The international visibility of covid-19 deaths, heightened by their predominance in “the West,” plays no small role in our story.

The visibility of covid-19 deaths is greatly bolstered by the epidemiological perspective described in the previous section. It is further heightened by two additional considerations.

The first is the lack of information. The initial response to the pandemic has been reactive testing, with only ill — often desperately ill — patients being tested and others being told to wait until their symptoms worsened. This approach does not serve (and is not intended to serve) any statistical purpose: its sole purpose is to confirm positive cases among severely ill patients and then isolate and treat them. However, as a consequence, while we might have a pretty good idea of covid-19 deaths — though there are issues here to be resolved³ — we only have

³Excess deaths has been a feature of this pandemic period, leading to the possibility that we may be undercounting covid-19 deaths; see, for instance, Galeotti, Hohmann and Surico [27] The opposing argument has also been made: that we may be ascribing too many deaths to covid-19,

rough bounds on covid-19 *infections*. Table 1 displays country-level statistics on tests, positive cases, and the case fatality rate (CFR), which is the death rate from known positive cases. These rates are frighteningly high, often—as in the case of Spain, Italy or the United Kingdom—reaching well into double digits. For the world as a whole we have around 4.7m cases with around 310,000 deaths (as of May 17, 2020), a CFR of around 6.7%.

Country	Tests [1]	Confirmed [2]	Deaths [3]	Case Fatality Rate [3/2]	Tests (per million)
U.S.	8,412,095	1,334,280	79,254	5.94	25,628
Spain	2,467,761	223,578	23,822	10.65	52,805
U.K.	1,728,443	215,260	31,587	14.67	25,589
Italy	2,514,234	218,268	26,478	12.13	41,654
Germany	2,755,770	170,979	7510	4.39	33,142
France	724,574	138,421	26,230	18.95	10,811
India	1,759,579	74,219	2,415	3.25	1,300

Table 1. Tests, Cases and Deaths for Selected Countries. Notes: Figures accurate as of May 10, 2020. Figures in the first three columns for India (May 12) are from <https://www.covid19india.org/>, and elsewhere from Wikipedia; see https://en.wikipedia.org/wiki/COVID-19_testing and https://en.wikipedia.org/wiki/Template:COVID-19_pandemic_data.

It is not uncommon for commentators even today, well into the pandemic, to use these rates as rough proxies for the true fatality rate from covid-19, but of course that is a far cry from the truth.⁴ The last column of Table 1 shows that there are wide inter-country variations in the number of tests conducted per million population, with France, the UK and the USA lagging behind among the advanced countries, and India revealing a severely depressed record of testing intensity, with additional peculiar features to which we return below; see Section

simply because individuals dying of other morbidities may have been found to have been infected; see, for instance, Lee [49].

⁴Even months into the crisis, there is confusion among observers and certainly the general public regarding how deadly covid-19 really is; see, for instance, Caroline Chen’s report [16] in *ProPublica*.

4. But the point is that we are nowhere close to universal testing. Every country predominantly tests the very ill, with the obvious outcome that the CFR is nowhere close to the true death rate from covid-19.

The fact of the matter is that the public does not know what the mortality rate from covid-19 is. Indeed, no one knows, and we won't know in a definitive way until our samples cease to be biased, where the word is invoked not in the context of treatment but in the sense of access to statistical knowledge. This brings into relief the usefulness of conducting tests on completely unbiased and random national samples, a point widely appreciated at a very early stage by a multitude of statisticians and economists. At the time of writing, the samples we have may be too small to yield statistical confidence, or too prone to bias (such as asking for volunteers or sampling from a biased sub-population, such as shoppers). In "natural experiments" such as the covid-19 infection on the Princess Diamond cruise ship, age distributions are not well-represented either in composition or in size. This situation will change very quickly over the coming weeks or months. What we do know without a doubt is that infection mortality rates are orders of magnitude lower than the case fatality rates reported in Table 1, and there is every likelihood that these rates will be somewhere between 0.5% and 0.8%, higher than the rate of 0.1% commonly ascribed to the flu, but not stratospherically so. For more discussion, see Section 4.

A corollary of the above argument is that we also do not know the contagion rate for the virus.⁵ We can (tentatively) treat the total number of covid deaths as accurate information, but if we do not know what the total number of infections is, it is not possible to factorize deaths/population into the accounting expression:

$$\text{Deaths/population} = [\text{Deaths/infections}] * [\text{Infections/population}],$$

where the first term on the right would reflect the true fatality rate, and the second would be a proxy for how contagious the disease is. The missing culprit is "infections," on which we do not yet have accurate data.

⁵The word "contagious" is invoked relative to some non-behavioral baseline. As already noted, behavioral reactions by the population would alter the effective pace of propagation of the disease.

For instance, compare a mildly contagious but highly fatal disease to a highly contagious but flu-mortality-like illness. Both could multiply out to the same death/population number, but they would affect our behavior in very disparate ways—your authors, for instance, would probably be terrified of the first scenario and more accepting of the second. But from an overall public health perspective the two scenarios are very similar; if anything, given the behavioral reactions just outlined, the highly contagious but mildly fatal illness could wreck the public health system to a greater degree than the low-contagion high-fatality disease.

Any competent epidemiologist knows (or should know) these things, but is deeply concerned that the public — left to its own selfish devices — will not do enough to protect society. That concerned epidemiologist would love to say that both contagion and fatality rates are high, and often does. She might focus, for instance, on the exponential growth of reported cases (contagion? not really) and simultaneously on the case fatality rate (the death rate? not really). She might say that a great majority of the afflicted are young — which will be generally true as long as a great majority of the population is young, or that the disease causes irreversible damage even if it does not kill. All of this has enough partial truth to it to carry the ring of truth, and represents a well-meaning attempt to drag individual behavior towards the social optimum. Therefore, the vast majority of the public remains imperfectly informed about some salient features of covid-19, even to the extent that such information may be available.⁶ The one feature that is made highly visible is that we are locked in mortal combat with a killer disease.

The second consideration that works to highlight the visibility of epidemic deaths is the view that a disease such as covid-19 claims lives in a predatory manner that the suspension of economic activity cannot. In short, a welfare contest between

⁶Certainly, with a public that seeks out its own independent information and in particular is fully and intelligently informed about aggregate deaths, the epidemiologist cannot successfully manipulate both contagion and fatality rates, but even here there is no incentive for a government policing a lockdown to credibly reveal the correct statistics to the public. This is not a conspiracy theory. It is a simple fact that can be associated even with benevolent (if paternalistic) governance.

lives and the disruptions caused by a cessation or reduction in economic activity should be no contest at all. This no-contest view is soundly supported by the epidemiologists. No contest, echoes any Government which has thrown its weight behind a lockdown. For instance, New York Governor Andrew Cuomo, whose empathetic daily briefings have gained a wide following, and not just in New York, had this to say:

“How much is a human life worth? That is the real discussion that no one is admitting, openly or freely. That we should. To me, I say the cost of a human life, a human life is priceless. Period.”

We can see arguments for or against this position. An economist could estimate a value of life for you in twenty different ways, ranging from private decisions to cross a busy street, or expenditure on airline safety, or the extent of public smoking bans. Each of these would return a finite price of life. But there are counterarguments. I might get on a plane because I (correctly) attach infinitesimally low probabilities to a fatal crash. I might drive a car or cross a busy street because I (incorrectly) attach arbitrarily high probability to being a better-than-average driver, or to being nimble enough to avoid getting run over. These mind games so beloved to revealed-preference economists do not prevent us from attaching extremely high value to otherwise healthy life, especially when confronted explicitly to make the choice — and only with the prospect of monetary loss.

Ingenuous though his words might sound, that is why we would agree with Governor Cuomo. Faced with a lockdown that destroys some economic value and protects lives, we would take the lockdown; which is to say, a lockdown with extensive welfare measures in place. This is a clearly enough articulated position, in principle.

But this position-in-principle inevitably also provokes the pragmatic question: what if the State is unable to implement the first-best option just outlined—for reasons that could range from financial constraints to lack of expertise to ignorance to incompetence? Even more to the point, what if the State were

unwilling to do so — for reasons of being unprepared to make the effort to overcome the shortfalls in State capacity just mentioned, or, additionally, unprepared to disturb the settled weight of vested interests by engaging in redistributive policy? (The notion of “redistributive policy” is here interpreted broadly as an orientation tilting in favour of alleviating the burden of the poor laboring classes at the possible cost of some benefit—fiscal or health-related—to the relatively affluent classes.) In the remainder of this essay, we will demonstrate just how important these questions are in the Indian context.

The problem is that in India, and without the shadow of a doubt, *an economic lockdown will entail the widespread loss of life*. There are lives that will be lost by lockdown-induced conditions of starvation, ill-health, violence, a rise in indebtedness, and persistent loss of incomes and livelihoods. Without sustained and comprehensive protection to those at risk, the entire philosophical question of whether a human life has finite value or not is far less relevant. In India especially—and in poor countries more generally — it is not a question of lives versus economics, it is a question of *lives versus lives*. Or more pertinently, it is a question of which lives have greater visibility.

Lives lost through violence, starvation, indebtedness and extreme stress, are invisible, in the sense that they will diffuse through category and time. Someone will die of suicide. A woman will be killed in an episode of domestic violence. The police might beat a protestor to death. The deaths will occur not just now, but months and years from now, as mounting starvation and indebtedness and chronic illnesses take their collective toll. As Hari Vasudevan wrote on April 22:

Starvation is peculiar. It does not kill quickly. Gandhi showed that. So have many others. But, ultimately, it kills surely. Perhaps, under the relaxation of the lockdown, a hungry family will go back to work, having been unable to move more than a hundred kilometers, and now terrified of a homecoming fraught with the suspicion of contagion . . . " [93].

The non-covid deaths from a lockdown will blend into the surrounding landscape of ill-health and death from a multitude of categories; their very diffusiveness makes them not news, though they will reappear under careful

record-keeping by statisticians, public-interest activists or economists. The website <https://thejeshgn.com/projects/covid19-india/non-virus-deaths/> tracks lockdown-related deaths not ascribed to covid-19. Deaths are tracked in national and local newspapers in English and in several (but not all) Indian languages. The categories into which deaths now primarily fall are suicide, migration-related accidents, violence (domestic and otherwise), exhaustion, financial distress and hunger. The tracking is laudable but necessarily incomplete, and this incompleteness is bound to increase as the newspaper reports fail to make the connection—as they invariably and understandably will—between each death in question and the lockdown that caused it. Neither will these deaths carry the same urgent exponential signature as the initial trajectory of covid-19 deaths will display, even though they have spiked days after the lockdown. But over time, they will surely mount, just as they will surely slide under the radar of a world eager for well-defined events. These lost lives are invisible, but are just as surely ascribable to covid-19.

We will argue that it is this conjunction of visibility and invisibility that drives the Indian response: unexpectedly and often brutally efficient in enforcing a lockdown, so as to gain international kudos, while verbally exaggerated and yet silently deficient on the relief that is so desperately needed for those whose livelihoods are at stake. We are seeing a Central State intervention that is geared maximally to achieving visibility, rather than the less optically dramatic but equally important act of substantive amelioration. It is international political economy with domestic consequences to boot, as we shall see below when we review the changed fiscal relationships that are beginning to emerge between the Indian Center and the Indian States, the new amendments to labor laws that are swiftly being put into place, the clauses that incentivize corporate donations to flow towards the Center, and the wholly inadequate definition and implementation of the relief packages. In short, the Indian Government is succumbing to the overriding temptation of implementing all the trappings of a stringent lockdown without bothering overmuch about delivering compensating welfare relief. The former strategy is amenable to propaganda as

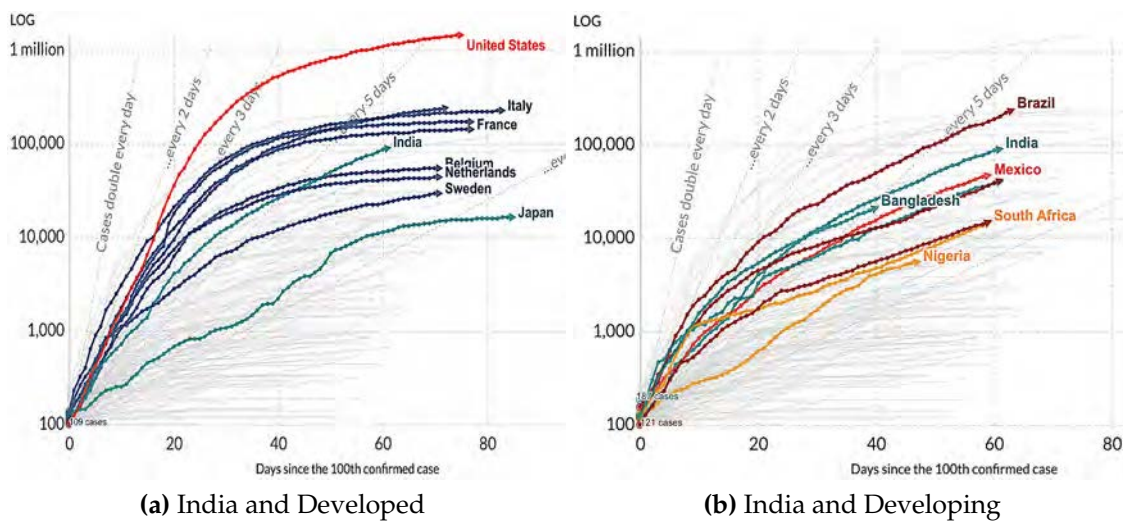


Figure 1. Time Path of Cases Since the 100th Confirmed Case of Covid-19; India and Selected Countries. Source: *Our World in Data*, <https://ourworldindata.org/>.

effort directed to the prevention of covid-related deaths. In contrast, the latter approach possesses less immediate advertisement-value, and is more difficult, plodding and laborious to implement. It looks unlikely to ever be.

In what follows, we will selectively describe some of the many practical suggestions that have been made by various commentators on what sort of relief package might be dictated in a time of lockdown and beyond, actual State performance in this regard, some consequences and correlates of State policy, and the social attitudes of the ruling classes. We hope to be able to locate our assessment within the framework described in this section, one that highlights the relatively easy rewards to State intervention that are to be had from a policy that prioritizes visibility above other goals.

4. The Progression of Covid-19 in India: A Brief Account

Figure 1, taken from the website *Our World in Data*, at <https://ourworldindata.org/>, locates India with respect to other countries in the progression of the disease. The figure shows how the disease has progressed, measured in days since the

100th confirmed case. Panel A shows this for India relative to some other advanced economies, and Panel B does the same for India relative to some other developing countries. (The light grey lines show all countries.) Nothing here suggests, despite the zeal of lockdown enforcement, that India is headed for any unique destination. With populations taken into account, and barring the development of widespread testing or a vaccine, it suggests that the Indian curve will soon overtake most other countries in terms of absolute numbers — although this is tempered by the low CFR; see below. Given the enormous population density of Indian megacities and even its smaller towns, as well as the population clusters (e.g., in slums) within the cities, this is not surprising — if anything, it points to the relative stringency of the lockdown measures that have been adopted in the country.

Figure 2 does a bit more in terms of percentages. Panel A shows that while India has a similar time trajectory on the aggregate, it has a lower case fatality rate: at just a shade over 3%, it is far lower than the world average of around 7%. One suspects (correctly, as we will argue below) that this has to do with the age distribution of the population. This somewhat optimistic scenario is tempered by Panel B, which suggests that India, with its low testing rate, is surely undercounting both the cases and most likely the deaths as well. Taken together, while Panels A and B do not say much about the *trend* of the disease in India — Figure 1 is more relevant for that — they do suggest that the multiplicative constant that anchors the overall trajectory of progression has yet to fully reveal itself.

Now let us go a bit deeper into the Indian experience. As of May 17, 2020, India is recording just short of 100,000 cases and a shade over 3,000 dead, a case fatality rate of 3.16%. Table 2 shows the pattern of cases and deaths across several Indian states and territories that together account for the vast majority of confirmed incidences (94,617 of the 95,698 cases and 3,012 of the 3,025 deaths). Just Maharashtra, Gujarat, Tamil Nadu and Delhi account for 2/3 of both cases and deaths — this regional clustering is, of course, only to be expected of a highly contagious disease and seen the world over. These numbers don't tell

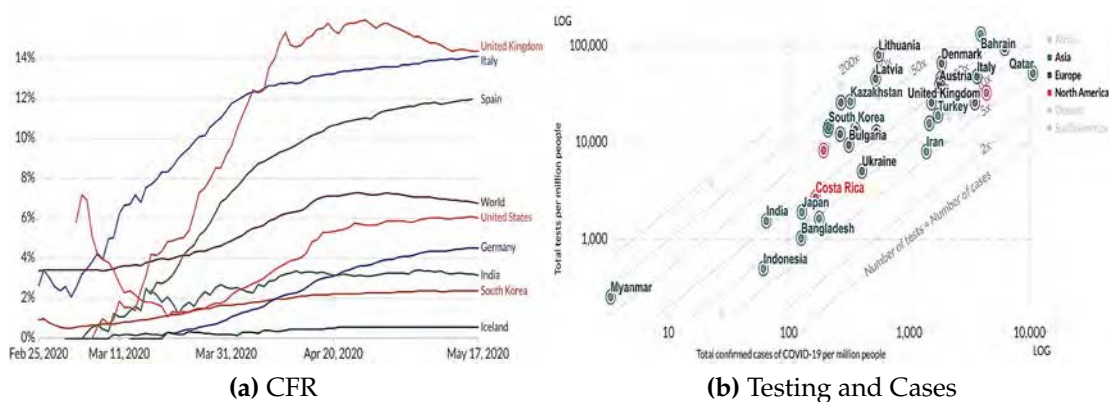


Figure 2. Case Fatality Rates (Panel A), and Tests and Cases Per Million (Panel B); India and Selected Countries. Source: *Our World in Data*, <https://ourworldindata.org/>.

us anything about how truly widespread the disease is, nor how the lockdown is affecting its incidence, because the tests are as they should be at this stage — reactive in nature and not designed for statistical inference. Testing is therefore overwhelmingly concentrated on those who are seriously ill and in need of medical assistance, and is being used — as in other countries at this stage of the curve — for confirmatory diagnostic purposes.

That said, some features of this table are of interest. First, states such as Tamil Nadu and Kerala are doing extremely well in that they are registering very low case fatality rates. This is not surprising in the case of Kerala, even with their relatively low testing rate. Kerala has a history of battling the Nipah epidemic, and the first outbreaks of covid-19 also occurred there, as we've already noted. Kerala's secret has never been high-tech, but rather reliable medical facilities, supreme common sense in matters such as contact tracing and quarantine, and a highly educated population that understands the need for such measures. As the *Economist* observes [23]:

"Kerala tamed Nipah within a month, adopting an all-hands approach that included district-wide curfews, relentless contact-tracing and the quarantine of thousands of potential carriers. Kerala has used the same simple, cheap tools to fight covid-19, with similarly stellar results."

Region	Cases [1]	% 1-Week Growth	Deaths [2]	CFR (%) [2/1]	Tests per m.
Maharashtra	33,053	7.64	1,198	3.62	2,243
Gujarat	11,380	3.56	659	5.79	2,114
Tamil Nadu	11,224	6.04	79	0.70	4,316
Delhi	9,755	4.52	148	1.52	6,853
Rajasthan	5,202	4.88	131	2.52	3,002
Madhya Pradesh	4,977	3.90	248	4.98	1,263
Uttar Pradesh	4,464	4.84	112	2.51	765
West Bengal	2,677	3.92	238	8.89	887
Andhra Pradesh	2,380	1.06	50	2.10	4,577
Punjab	1,964	0.92	35	1.78	1,735
Telangana	1,551	2.78	34	2.19	518
Bihar	1,320	12.05	8	0.61	383
Jammu and Kashmir	1,183	5.53	13	1.10	6,130
Karnataka	1,147	5.04	37	3.23	2,210
Haryana	910	2.59	14	1.54	2,721
Odisha	828	12.35	4	0.48	2,089
Kerala	602	2.38	4	0.66	1,282
All-India	95,698	5.5	3,025	3.16	1,606

Table 2. Cases, Deaths and Tests per Million by Indian States and Territories. Notes: Numbers as of May 17, 2020. Source: <https://www.covid19india.org/>.

That article was written on May 9. Eight days later, the number of deaths still has not changed. May it stay that way. But we know that Kerala has many emigrants to the Middle East, and infection rates are high there. They will be returning on the first available flights, once those flights are permitted. But the State Government understands this and is preparing for it the best they can. "We are training up school teachers," says the Health Minister of Kerala, K.K. Shailaja.

Tamil Nadu is a success story along another dimension — they are testing at a relatively high rate. They have the third highest case count in the country — assuredly, in part, because of the testing. 80% of Tamil Nadu's 11,000+ cases

are asymptomatic: another sure sign that the state is testing aggressively. The numbers are dramatically higher than those for Kerala, but Tamil Nadu holds a comparable CFR of 0.70%, on par with Kerala's 0.66%. It has preemptively extended its lockdown beyond the current Central guidelines. Again, tracking and tracing is of a very higher order, and a home quarantine option is available, with regular monitoring.

The state of Odisha, one of the poorest in the country, is another stand-out in terms of readiness, but with inadequate facilities relative to its competence and understanding. Like Kerala, Odisha understands disasters — it faced down the deadly 1999 cyclone. With its limited resources, Odisha nevertheless became the first state in India to incentivize self-declaration of the disease, and is testing well above the national average. Odisha incentivized their quarantine scheme with an offer of INR 15,000, and has managed to contain the deaths from covid-19 to an admirable degree. That might change, as migrants continue to flood back home. Odisha has registered a significant recent spike in confirmed cases, as Table 2 shows.

Despite comparably low mortality rates in Bihar, it is *extremely* doubtful that the same steps are being taken there. Bihar has an abysmally low rate of testing, and very poor health facilities. Ordinarily, one would expect that to translate into a very high CFR, so overall Bihar's statistics do not hang together in any consistent way. One can only presume that the virus had not been firmly seeded there. That is about to change. Most alarming is the recent spike in cases, which — as in the case of Odisha — is very likely due to returning migrants from the mega-cities. (For more remarks, see Section 6.4.) In the coming weeks and months, Bihar will be a potential hotspot for the virus, unless quarantining facilities rise to the occasion.

Similar worries beset (or should beset) the states of West Bengal and Uttar Pradesh, both of which also display very low rates of testing. West Bengal in particular stands out quite dramatically in its extremely high case fatality rate. Again, this could be the outcome of low testing or poor deployment of health

facilities — at this stage, we cannot tell. But there is little doubt that the state, with the megacity of Kolkata at its core, is a potential flashpoint for the disease.

Returning now to India as a whole and its comparison with the world at large, one feature that stands out is the relatively low CFR of 3.16%. This is way short of the world average, which hovers around 6.7%. Notice that India is low on the world testing scale — see Figure 2 Panel B — which would suggest that it would essentially be testing the more serious cases. But that would generally move the CFR upwards. On the other hand, given that the Indian population is younger than all economically advanced economies, that would bring the CFR down.

It is possible to tentatively reconcile these opposing tendencies if we have some ideas of covid-19 incidence by age group. The only information we could find on this is reported by Statista.com for a sample of 2,344 patients.⁷ Table 3 reports this case distribution for India on Row 1, recalls India's population share by age in Row 2, and displays the impact of covid-19 on each age group in Row 3 (Row 1/ Row 2). As expected, the incidence is higher among individuals of working age. The remaining rows record CFRs by the same age groups from different countries, and use these, weighted by the numbers in Row 1, to "predict" the overall Indian CFR. The results are striking: each of these predictions drastically understates the actual Indian CFR of 3.16%. That number may *look* small, but corrected for age it is actually extremely high. Just why this is the case remains to be seen. One possibility, as already mentioned, is that testing is very low, so that only the more desperate cases are recorded, which naturally have high mortality associated with them. The other possibility is that these are truly high fatality rates coming from lack of proper care conditional on illness. While we may safely rule out the latter hypothesis in states like Kerala, the jury is still out on the other states. In the absence of adequate health infrastructure, a stringent lockdown can only go so far.

That noted, we can be quite confident in stating that these rates far exceed the true or *infection* fatality rate (IFR) , which is deaths divided by infections,

⁷See <https://www.statista.com/statistics/1110522/india-number-of-coronavirus-cases-by-age-group/>.

	Age Group									Implied CFR India
	0-10	11-20	21-30	31-40	41-50	51-60	61-70	71-80	81+	
Case % [1]	4.2	9.7	21.9	22.9	16.3	13.1	8.7	2.6	0.6	
Pop % [2]	19.8	20.9	17.6	14.4	11.1	7.3	5.3	2.4	0.9	
Impact [1/2]	0.2	0.5	1.3	1.6	1.5	1.8	1.7	1.1	0.6	
CFR China	0	0.2	0.2	0.2	0.4	1.3	3.6	8.0	14.8	0.95
CFR N'lands	0	0.3	0.1	0.2	0.5	1.5	7.6	23.2	30	1.81
CFR Italy	0.2	0	0.1	0.4	0.9	2.6	10	24.9	30.0	2.29
CFR Spain	0.3	0.4	0.3	0.3	0.5	1.3	4.4	13.2	20.3	1.28
CFR S. Kor	0	0	0	0.1	0.2	0.7	2.5	9.7	22.2	0.74
CFR India										3.16

Table 3. Counterfactual Indian CFRs. Numbers in the final column report Indian CFR that would be predicted by the age-based CFRs of different countries, using India's age distribution of cases in Row 1. Row 3 shows how different ages are impacted relative to population share. Sources: Case distribution from sample of 2,344 Indian patients reported by *Statista*, <https://www.statista.com/statistics/1110522/india-number-of-coronavirus-cases-by-age-group/>, Population age distribution from 2011 Indian Census, CFRs by age from *Wikipedia*, https://en.wikipedia.org/wiki/Mortality_due_to_COVID-19#Mortality_by_age.

including infections that are mild or asymptomatic. Studies of infection fatality rates are on the increase as antibody testing becomes more widely available, but many of these are problematic in one way or the other, and given the policy implications that could hang on this data, discussion around these efforts can become extremely contentious. One meta-study of published research [53] provides an average point estimate of 0.75%, with a pretty wide confidence interval (at the 95% level) ranging from 0.49% to 1.01%. These numbers are likely to undergo substantial adjustment as serological tests continue to acquire greater ease and precision, and as the sample size (as well as sampling methods⁸) continue to improve. As an admittedly rough rule of thumb, if India's CFR were to be scaled down by the same factor as the world's CFR of 6.7% must be scaled in order to reach the average point estimate of 0.75%, then India's IFR likely stands at around 0.35%, which is higher than that of the flu (widely thought

⁸With the obvious lacunae seen in sampling and statistical procedures for some of these studies, we would recommend that JPAL organize a crash course for epidemiologists.

to be around 0.1%) but not inordinately higher, even with the suspicion cast on health infrastructure. In any case, as already stated, these estimates await serious empirical confirmation.

These optimistic adjustments regarding the IFR notwithstanding, the coronavirus pandemic has brought into sharp relief the importance of having a solid country-wide health infrastructure which can respond quickly and flexibly to a health crisis — and India's weak preparedness for such contingencies. This is reflected in the country's poor record of testing, which has been seriously hampered by insufficient access to testing kits, especially of the type that permit rapid serological tests — even admitting that serological tests are of greater importance in later scenarios such as lockdown exit (or even research), whereas PCR testing is the more urgent from the point of view of treatment. The availability of indigenous technology is restricted to a very small number of domestic companies. The government has therefore had to import rapid testing kits, by placing orders with multinational companies for such kits with enhanced pack-sizes allowing for more tests per kit [40]. The experience here has been an unhappy one. A report filed in the *Economic Times* of April 27th [90] indicates that around the middle of April the government suspended its countrywide plan of conducting tests employing imported Chinese rapid testing kits, as these were allegedly faulty; and that all orders for such kits have been withdrawn. Chinese exporters have responded with denials and counter-charges of incorrect timing in the use of the kits.

Testing has been further compromised by the paucity of epidemiologists, who have an important role to play in surveillance, testing and identification. In an April 20th report, Anoo Bhuyan [11] points out that "more than a quarter of India's 736 districts have no district-level epidemiologists and 11 states have no state-level epidemiologist either, according to a letter from India's health ministry. . ." The letter, written on April 7th by India's Health Secretary and addressed to the states of the Indian Union, directs them to hire, on "a war footing," epidemiologists who are described as being "a crucial element in the effective management of . . . pandemics like COVID-19." Briefly, limited

resources and their poor deployment have been a feature of state intervention in tackling the coronavirus epidemic. A zealously enforced lockdown isn't everything.

5. Relief Measures

5.1. Introduction. Despite the extreme and emergent nature of the corona crisis, it is nevertheless quite remarkable that several detailed and practical measures for relief and rehabilitation have been provided, at short notice, by several commentators. We cannot possibly hope to cite all, or even most, of these contributions, let alone review them, but it is also the case that these proposed measures have an enormous overlap. After all, at some level, what needs to be done isn't rocket science. An enormous section of the Indian population will be hit very hard by the lockdown, and adequate transfers need to be provided to tide them over this difficult period. But the devil, as always, lies in the details.

As discussed by us in an earlier joint contribution with Lore Vandewalle [66], vulnerability to a lockdown is accentuated in India by three specific structural features of the population. The first has to do with the ubiquity of casual labor, accounting for well over 20% of all Indian households — such individuals are particularly vulnerable. The second is the preponderance of informal production — well over half of India's GDP is produced in the informal sector — and these are activities which cannot be easily taken online. Many of these are based on personalized relationships with other Indian households, but those relationships — domestic work, for instance — require physical interaction. Third, median household savings are low, and inadequate to take an estimated 38% of all households through even a 21-day lockdown (we are currently on our way to two months) if all their employment dries up.

The above considerations suggest substantial welfare gains to augmenting a lockdown with a redistributive plan that fully protects the most vulnerable. But apart from the distributive aspects of any relief plan, there are in addition macroeconomic angles — ranging from the propping up of demand (largely

through fiscal means), the management of supply-side issues (largely through monetary policy), and also the maintenance of fiscal balance across Center and States. Every relief plan must be evaluated according to how it fares on both the distributive and macroeconomic dimensions. We go into more detail below.

5.2. Distributive Considerations. The fundamental questions with targeted transfers are these: how do we reach vulnerable households, and what form should transfers take? A few years ago, this would have been a hopeless question, because targeting by economic characteristics was practically non-existent. Fast forward to today and the situation has changed somewhat; just how much will be discussed below. Very few individuals still file income taxes, it is true. But we do have some lists that continue to exhibit some degree of correlation with economic need, though the extent of that correlation continues to be debatable.

Several lists are potentially available for making targeted transfers to the population at large.

1. **JDY.** The most recent of these come from the bank accounts opened under *Jan Dhan Yojana* (JDY), a financial inclusion program started in late 2014. Around 380 million JDY accounts exist today, over half of which are owned by women. The vast majority of these accounts are in public sector banks, and around 60 million accounts appear to be held in regional rural banks.

2. **PDS** The second is the list that is available, under the public distribution system, for the distribution of foodgrain, sugar and kerosene at ration shops, or the PDS list for short. The PDS list as it now exists came into being under the National Food Security Act of 2013. It covers approximately 2/3 of the population: around 75% in the rural sector and around half of the urban population possesses uniform entitlement of 5 kg of foodgrain per person per month, with a household lower bound of 35 kg for a sub-list of the poorest households.

3. **NREGA** Then there is a list of individuals who have job cards under the National Rural Employment Guarantee Scheme, which guarantees up to 100

days per year of *rural* wage employment for all households with individuals above 18 years of age and willing to work. The scheme was rolled out in 1995 and has been extended to comprehensively cover rural India. A couple of points are to be noted: this is an exclusively *rural* list, and approximately 140 million individuals are signed up for job cards.

4. **BPL** The BPL (“below poverty line”) list is meant to be a comprehensive list of all Indian families that are economically disadvantaged. The identification of the poor under this list has not been an easy task, and the criteria used for BPL membership vary from state to state, and across rural and urban areas. Members are eligible for various benefits, such as cooking fuel. For this reason, membership on the lists has become a political issue and there are significant errors of inclusion. Moreover, the vulnerable in this crisis clearly transcend the relatively demanding and narrow class of those in poverty.

Both PDS and NREGA lists are linked imperfectly to bank accounts. Some Indian states — but not all — appear to have a comprehensive mapping between PDS recipients and bank accounts they might possess. Likewise, an amendment to the Employment Guarantee Act in 2011 requires that all job card holders under NREGA must have a linked bank account, but several states have continued to make payments in cash. JDY list-members do not have this problem by definition: they are *defined* by their bank accounts. How correlated they might be to people in need is another matter altogether.

Several observers have provided wide-ranging wishlists for the distributive portion of a relief plan. Reetika Khera [45] advocates the implementation of cash transfers, employing existing transfer schemes and National Electronic Funds Transfer. She also recommends in-kind transfers, to cover enhanced rations and an expansion of the PDS to include essential commodities such as oil and soap, while relaxing requirements of proof of eligibility by way of the cumbersome (and now potentially dangerous) Aadhaar-based biometric identification procedure. This is accompanied by suggestions of home delivery of food for children, the provision of shelter for migrant workers in urban areas, the opening of community kitchens, and the adoption of measures for controlling

the prices of essentials. On the health front, Khera advocates public hygiene education, the regulation of private health agencies, and extensive testing for covid-19. Further prescriptions, which also take account of the medium- and long-term, are available in an elaborate list prepared by a group of academics from Ashoka University — this is available in a two-part article in *The Wire* by Abhinash Borah et al. [12].

Parikshit Ghosh [31] advances the cause of extensive testing for covid-19 beyond the lockdown; and to make quarantining a feasible proposition, he recommends the grant of a “quarantine allowance,” citing the case of Odisha, which has provided for an incentive of Rs.15,000 for a two-week stay in quarantine. Apart from this, he also advocates a social safety net in the form of a quasi-universal basic income, to be paid out over the next six months. In this context, a novel aspect of Ghosh’s suggestion is that he advocates cash transfers via the PDS, an idea perhaps well worth exploring and to which we briefly return below.

We also note here a manifesto [22] with 635 signatories, to the Finance Minister’s announcement of a relief package (to be described and discussed below), seeking — among other measures — enhanced rations, implementation of minimum wages for NREGA workers, advance and increased pension payments, enhanced cash transfers via the JDY scheme, cash transfers to construction workers, assistance to pregnant women and mothers, expansion of coverage of farmers under the Prime Minister’s Kisan scheme, and a moratorium on all debts incurred after January 1st, 2020.

All of this is worthwhile advice, and while some of the detailed prescriptions made may be no more than counsels of perfection, they would not run to more than percentage points of GDP measured in the single digits — an expense well worth considering, as several other countries have. Indeed, some of this counsel could be viewed as fundamental and non-negotiable, such as universal access to the public distribution system at this extraordinary time. There is, in fact, wide and rather obvious consensus on this matter; see, for instance, Amartya Sen, Raghuram Rajan and Abhijit Banerjee, who write [68]:

“The correct response is to issue temporary ration cards — perhaps for six months — with minimal checks to everyone who wants one and is willing to stand in line to collect their card and their monthly allocations. The cost of missing many of those who are in dire need vastly exceeds the social cost of letting in some who could perhaps do without it.”

This is by no means a new observation. The Supreme Court made it in 2016:

“In the States in which drought has been declared or might be declared in the future, all households should be provided with their monthly entitlement of food grains in terms of the National Food Security . . . *regardless of whether they fall in the category of priority household or not* . . . The requirement of a household having a ration card is directed to be substituted by an appropriate identification or proof of residence that is acceptable to the State Government.”⁹ [Emphasis ours.]

5.3. Macroeconomic Considerations. There are features of the current crisis which may be viewed as a “supply side failure.” The most important of these have to do with the failure of supply chains. We have already mentioned the disruption of the agricultural supply chain, coming on the heels of *mandi* closures, which choked off the wholesale buying points in the chain. As a result, many farmers found themselves with harvests that they could not sell in the ongoing lockdown. Other choke points include production: there have been shortages of agricultural workers during harvests both for fear of the pandemic but also mainly because of police reactions. While there are features of the retailing chain that are specific to agriculture, it is not hard to imagine other supply processes being damaged in the same way in the manufacturing sector. For smaller firms without access to liquidity to tide them over, this could be a death blow.

It is important to note, however, that these are no ordinary supply bottlenecks. *The injection of liquidity per se will not get rid of them.* What is needed, in contrast, is an environment that will safely permit labor to work, or buying

⁹See Directions 30 (3 and 4) of the Supreme Court Judgment in *Swaraj Abhiyan v. Union of India*, Writ Petition (Civil) No. 857 of 2015, available at <https://www.legitquest.com/case/swaraj-abhiyan--ii-v-union-of-india-others/9B0E4>.

points to operate, without fear either of the virus or of unsympathetic law-enforcers entrusted with implementing the lockdown. Both these fears can be ameliorated to some degree by proper planning. In an early article [36], Yamini Iyer and Mekhala Krishnamurthy have advanced a useful conceptual apparatus for dealing with the epidemic, covering the issues of how to manage the movement of persons, the movement of food, the movement of funds and schemes, and the functioning of supply chains for agricultural commodities. The last mentioned item is of crucial importance in mitigating the severe costs of a generalized and long-drawn-out lockdown. Quite apart from its obvious role in catering to household needs on the consumption side, it is central if agrarian incomes are to be protected, especially with the crush of returning migrants from the urban areas. Sudha Narayanan [58] offers pragmatic advice on the freeing-up of *mandis* and all markets for agricultural produce, on managing post-harvest output, on decentralizing the procurement of foodgrain, and on avoiding unreasonable restrictions on the transport of commodities so as to minimize supply chain failures in an environment where “[m]any of the logistical disruptions have come from an ‘overzealous bureaucracy’ and police overreach in enforcing the lockdown.”

Again, these are not classical supply side problems. Expanding liquidity directly to companies, especially micro, small and medium enterprises (MSMEs), is certainly important. It will serve to prevent these companies from going under. MSMEs produce around 30% of Indian GDP, are spatially distributed almost equally in rural and urban areas, and contribute significantly to manufacturing, trade and other services. Equally important, MSMEs claim a major share of employment in India, accounting for over 110 m jobs.¹⁰ One can only hope that direct support to MSMEs will protect that employment as well, though it is unclear to us that it will; see, for instance, Section 6.5. At the same time, we should not expect an aggregate injection of liquidity, especially via the banking system, to have any substantive effect in combating the economic slowdown.

¹⁰This information has been taken from the Annual Report of the Government of India’s Ministry of Micro, Small and Medium Enterprises; see <https://msme.gov.in/sites/default/files/M SME-AR-2017-18-Eng.pdf>.

Such monetary easing via banks will generally be unhelpful from the supply side. As Rajeshwari Sengupta and Harsh Vardhan [70] have pointed out, banks have effectively become highly risk-averse because of a large fraction of non-performing loans (leading in part to the punishment of banks by the Government and the Reserve Bank of India), as well as the fact that a rising proportion of firms are highly over-leveraged. Commercial banks have been increasingly engaged in retail lending, while public sector banks have been passing the buck by lending on to non-bank financial companies (NBFCs). A liquidity easing to banks by the Reserve Bank of India is therefore highly unlikely to be passed along in terms of new credit to firms. Banks are likely to hoard that liquidity. Indeed, given that firms are facing a demand crisis, it is likely that the portfolio mix of loan demand will shift even more strongly away from productive investment to shorter-term sustenance, leaving banks even more unwilling to lend to firms.

In contrast, one might expect a substantial fiscal stimulus to serve to reverse, at least in part, a demand crisis that has been ongoing before the covid-19 lockdown and now is further exacerbated by additional drops in demand layered on by the increased uncertainty generated by the virus. The role of fiscal policy is further heightened by the monetary impotence highlighted in the previous paragraph. In this context, it has to be noted that the distributive transfers of the previous section and fiscal stimuli go hand in hand. In short, the most direct macroeconomic response to this should be fiscal rather than monetary — interventions on the spending side, and transfers can add to that response. It may be that the Indian government is reluctant to spend directly, but then there is a case for making transfers to deserving, targeted, vulnerable groups, and letting them shore up the demand side, to the extent possible, as a serendipitous byproduct. If the government is unwilling to engage in direct deficit spending to shore up the demand side, the least it can do is give the money away to those who need it the most, and wait for those funds to return as aggregate demand.

There is a final macroeconomic aspect to any relief package, and that concerns the relationship between the Center and the States. It should be noted that health is a State subject, and yet the States have been facing a funding shortage that

intensifies with each passing day of the lockdown. For one thing, revenues from the new goods and services (GST) tax have declined in March to under Rs 1 tr, as business shutdowns took their inevitable toll on sales tax revenues, the drop since March 2019 coming in at 8.4%. Under GST law, States are supposed to be reimbursed by the Center for revenue shortfalls in the first five years of GST implementation, which started in 2017, but there are arrears still to be released. Meanwhile, the Center has been advantaged by a drop in oil prices, which have been mopped up as Central revenue by virtue of an oil tariff hike. That raises the specter of excessive centralization of funds which the Center must do its best to avoid, but which it actually seems to be doing its worst to promote.

Fund transfers to the States have three important aspects. First, the States need the funds and will spend them. That will have demand-side effects which are welcome given the existence of a widespread demand crisis. Even money spent on health professionals and equipment will translate into income. Second, the incentive for the States to exit the lockdown will become better aligned to those of the Center. As matters stand now, given the severe shortage of resources, no State will want to exit the lockdown, fearing that it will have a spiraling epidemic on its hands. And finally, the decision rights over funds have to match the informational reality on the ground — States and local governments have a far better knowledge of local conditions, and can react to them in more flexible ways than any one-size-fits-all that the Center might adopt.

5.4. The Indian Government's Relief Plan 1. It was only after the first lockdown of March 25th was implemented that the Finance Minister announced a covid-19 relief package on March 27th. In light of a new package just released at the time of this writing, we will refer to this as Plan 1. The overall package was valued at Rs. 1.7 trillion (or around US 22.5 billion dollars). Under Plan 1, these earmarked funds were to be deployed for the following purposes [15]:

1. Rs.500 per month, for 3 months, to an estimated 200 million JDY female account holders;

2. An additional 5kg of wheat or rice per person on the PDS list, and 1kg of pulses per PDS household, for 3 months;
3. Enhanced "rural employment guarantee" daily wages, from Rs.182 to Rs.202, presumably available for job card holders on the NREGA list.
4. A cash transfer of Rs.2000 to 87 million farmers under the PM Kisan scheme;
5. Free Liquefied Petroleum Gas cylinders for 86 million Ujjwala scheme beneficiaries (who are all BPL families) for 3 months;
6. An ex gratia payment of Rs.1000 to poor senior citizens, widows and disabled persons.
7. Medical insurance of Rs.5 million for health workers fighting covid-19.
8. Collateral-free loan of up to Rs 2 million for female self-help groups.

In addition, for the organized sector, Plan 1 envisaged government contributions to Provident Funds for those employees earning under Rs 15,000 per month in companies with fewer than 100 employees, and permits a non-refundable advance of 75% of the Provident Fund, or 3 months' wages, whichever is lower. For construction workers, Plan 1 directs States to provide relief under the Construction Workers' Welfare Fund, which would be made available to the States. The Plan also makes available unallocated funds under the District Mineral Fund to be used by the States for supplementing medical testing and screening.

Overall, Plan 1 is less than 1% of India's GDP. This compares very unfavorably (in percentage terms) with the allocations made by economically advanced countries. According to Anderson et al [6], the "immediate fiscal impulse [of] additional government spending (such as medical resources, keeping people employed, subsidizing SMEs, public investment) and foregone revenues (such as the cancellation of certain taxes and social security contributions)" is of the order of 9.1% of GDP for the USA, 6.9% for Germany, and 4.5% for the UK. The fiscal stimulus in per capita terms shows up India in an even worse comparative

light, by virtue both of its much larger population and far greater levels of poverty and vulnerability. Just as an example, assuming that only one-half of India's 1360 million population will need special assistance, the funds available from the fiscal package per needy person works out to just Rs.2,500, or around USD 40!)

As it happens, Plan 1 is probably of the order of only 0.6% of GDP. While observers such as Jean Drèze correctly laud the government for increasing in-kind allocations via the PDS, Drèze [20] writes:

"Indeed, the budget has been padded. For instance, by including Rs.16,000 crore of pre-committed [PM-Kisan] expenditure, and Rs.5,600 crore for [NREGA] wage increases that had already been notified by the rural development ministry on March 23. The release of excess foodgrain stocks is billed at so-called economic cost, when in fact, their opportunity cost is much lower. (This is an old accounting anomaly for which the FM is not responsible.) And the funds being sought from construction workers' welfare funds don't really belong to the Union government. If we focus on novel relief measures funded by the Centre, the budget is likely to be closer to Rs.1 lakh crore than Rs.1.7 lakh crore."

It might sound somewhat curmudgeonly of Drèze to castigate the government for including NREGA wage increases that had been announced on March 23, but a little postscript might convince the reader that this is actually quite charitable of him. The prescribed NREGA wages in most states are actually higher than the new announced minimum, and besides, would NREGA function under a lockdown at all? April 2020 has seen a year-over-year decline of 86% in NREGA employment: in that month, an estimated 3.4 million households were provided work as opposed to 17m in April of 2019 [4]. This is a catastrophic decline which the Government is reportedly taking recent steps to reverse (with proper social distancing guidelines for public employment programs).

A leading feature of Plan 1 is its transfer of Rs.500 per month to female-owned bank accounts under the JDY list. There is serious concern that the JDY list could be the wrong one to use, because it is not even clear how clustered these accounts are across families. It is hard to get a measure of such clustering, but

it is certainly the case that many are unaware of having an account under JDY. Rohini Pande, Simone Schaner, and Charity Troyer Moore [61] observe that:

“A nationally representative survey from 2018, the Financial Inclusion Insights Survey, asked respondents whether they have a bank account and, if yes, whether it is a JDY account. Roughly 80% of female respondents stated they have a bank account, but only 21% said they have a JDY account. What drives the gap between government and survey numbers? Likely some combination of dormancy, account duplication in the system and the lack of knowledge among women about the type of account they hold.”

The authors estimate that some 125–175m poor women do not have access to JDY accounts, and so not, a fortiori, to the transfers.¹¹ They also note that one in four poor women live more than 5 km away from their nearest banking point. Their implication is that Indian relief cannot rely on cash, or not on cash alone. We reserve judgment on this implication, but certainly there is room to do more (at least temporarily) on the non-cash front.

Indeed, there is enough foodgrain stock to do this for *several* months. Dipa Sinha [76] examines the hike via PDS of 5kg grain/ 1 kg pulses, and correctly observes that there is a clear scope for more aggressive in-kind transfers. If universal coverage is permitted under PDS (and 20% self-select out, leaving 80%), that coverage can comfortably persist at 10kg of grain per person for six months, which would work out to about 65 million tons, at a time when the stocks available with the Food Corporation of India already run to 75 million tons, with the prospect of an additional 30-35 million tons arriving from post-harvest procurement. But such expansion, when considered in particular States and Territories, appears to present unique bureaucratic challenges, as Sinha notes in her article.¹²

¹¹They argue that by the United Nations poverty criterion of USD 2.50 per day, roughly 325m women are under the line, giving them the lower bound of 125m even if all 200m JDY account holders are under the line as well. The upper bound comes from their estimate that no more than 75% of the JDY holders are below the poverty line.

¹²In the same article, Sinha writes: “In Delhi for instance, a non-ration cardholder is required to enrol herself online first by entering their phone number and getting an OTP. They are required to then upload their Aadhar as well as a family photo. Once that is successfully done, they will

Meanwhile, the Indian Government appears to have settled on more creative ways of handling their food surplus. According to Agarwal [2] in *The Wire* on April 21st, “[t]he Ministry of Petroleum and Natural Gas has announced that the ‘surplus rice’ available with the Food Corporation of India will be ‘allowed to be converted to ethanol for utilisation in making alcohol-based hand-sanitizers’ . . . The ministry has so far not clarified what it means by ‘surplus quantities of rice’, at what price it intends to buy the rice from FCI and when.”

Returning now to cash transfers and the modalities of such transfer: there is certainly room to transfer more cash, *much* more, if the Center’s capacity were to be viewed as the only constraint. On the modalities, if JDY is believed to be excessively clustered or urban, there are other lists at hand, each favored by different observers. Jean Drèze and Reetika Khera’s list of preference is the NREGA compilation, and they underscore Pande et al.’s reservations on the JDY list:

“The reason is that the job-cards [NREGA] list is a transparent, recursive household list with village and gram panchayat identifiers, while the list of JDY accounts is an opaque list of individual bank accounts. Cash-in-hand may seem like the antithesis of [JDY and mobile banking], but this option may become important in the near future if the banking system comes under further stress. There are precedents of effective use of the cash-in-hand method, notably in Odisha for pension payments, and in various states for NREGA wage payments. Several states (including Andhra Pradesh, Odisha and Tamil Nadu) have already resorted to cash-in-hand for relief payments during the lockdown.”

We agree that the reservations regarding JDY are well-founded, though there is little doubt that it represents the swiftest route available to the Central Government — never mind that from the point of view of the recipient it may be

receive an SMS which has a link to the e-coupon. Beneficiaries are expected to have smartphones through which they open the e-coupons when they go to collect their rations . . . Therefore, the assumption is that every person not only has access to a smartphone but also the technical capability to fill in online forms. . . . Moreover, after a day of launching, the website was down for over three days because of the overload. There was also a fake website claiming to be issuing ration cards . . . Each state seems to be coming up with some such system of identifying or verifying those who should be included, even whilst they are claiming to have made the PDS universal.”

more problematic. The NREGA list has an estimated 140m job-card holders on it; the PDS has 230 million cards that pertain to 800m households. The former is entirely rural, which certainly does not eliminate it from consideration, as one could combine it with other urban measures. But it seems odd to not regard the PDS list, at least at a first cut, as an obvious alternative. The Ashoka University group of economists mention the PDS, and Parikshit Ghosh [31] uses this list to generate more explicit calculations for a quasi-UBI (quasi, given that the PDS covers 60% of all households):

A little back-of-the-envelope calculation shows that a Rs. 1,000 monthly grant per member to each PDS household (Rs. 5,000 for a family of five), continued for 6 months, should cost about 3% of GDP, or Rs. 5.7 trillion (scale it up if you wish). For a crisis of the century, spending this much to secure the basic needs of our fellow citizens seems like a no-brainer . . . Financing this additional expenditure through borrowing should not pose a problem. Private investment has been weak for a long time and in the current climate of uncertainty, it is bound to suffer another blow. It is a safe bet that new government debt is not going to create a lot of crowding-out, and money in people's pockets will also act as a much-needed fiscal stimulus."

It appears that the PDS accounts are linked to well-defined bank accounts quite well in some States, and badly or perhaps not at all in others. Our own investigations (admittedly, at short notice), have not turned up anything definitive on the subject. While it should be easy to use such accounts for direct deposit where available, there is a question about whether cash can be taken efficiently and safely via the PDS when bank accounts are not available. We leave this as an open question that deserves immediate and urgent attention.

Whether or not cash is sent through the NREGA or the PDS list, the NREGA list can be used for what it was originally intended for. As already noted, there has been a dramatic decline in employment via this channel, overwhelmingly caused by the lockdown. While such zeal at the start of an unprecedented crisis is understandable, it runs counter to the relief package of the Government, which explicitly factors in higher NREGA wages as part of the payout. The Government cannot have it both ways. As Reetika Khera [45] has argued,

NREGA could expand its work guarantees well beyond 100 days per annum, and she has called for 20 days per month during the crisis.

As MNREGA is implemented in rural areas only, it has to be suitably complemented in cities in order not to prolong the human tragedy of the first week of the lockdown. Thousands of poor migrant workers have been frustrated by the shut-down of transport facilities and closed state borders in their effort to return to their village homes. Many have been forced to undertake foot journeys of several hundreds of kilometers, with limited cash to hand, and little access to food, water, or shelter. Trekking laborers have been rounded up and locked up in crowded enclosures. In one shocking incident, a contingent of migrants was showered with corrosive disinfectant. Significant reports of deaths are beginning to come in, including the deaths of children. There is little doubt that these will multiply as the coming difficult days go by.

In summary, the Indian Government has allocated just a little under 1% of GDP to the plan. Taking into account the fact that some provisions of Plan 1 are already in the Union Budget, while others (such as NREGA wages) rely on some dubious accounting, the effective assistance is significantly smaller than the promised 1%. This shortfall is clearly mirrored in the numbers. Consider, for instance, the proposed allowance of Rs 500/month/family: the average monthly per person consumption expenditure is itself about two-and-a-half times this amount; and, indeed, even the average per person expenditure of the poorest 20% of the population exceeds the allowance [88].

As for in-kind assistance, we've discussed these in detail, but that discussion omits items which are not even mentioned in Plan 1. For instance, there are serious shortages even in the ability to equip health workers with protective personal equipment (PPE) such as surgical gloves, masks and body suits. In feedback sought on the availability of health infrastructure from 266 District Collectors and other senior Indian Administrative Service officers, 47% disagreed or disagreed seriously about the availability of sufficient PPE, while this figure was of the order of 59% for Intensive Care Unit beds, and 72% for ventilators [94]. An aspect of sensitivity to priorities in planning is starkly reflected in the fact that

despite a WHO notification on global shortages of PPE on February 27th, “the Indian government waited till 19 March to issue a notification prohibiting the export of domestically manufactured PPEs and the raw material for the same” [46].

Plan 1 comes up short in addressing the severe resource scarcities faced by the State governments, which need in turn to decentralize further to local administrations who understand the nuances of ground realities. State repositories of funds cannot take advantage of “corporate social responsibility” spending: such spending seems only to be allowed for contributions to *Central* coffers. Specifically, a public charitable trust was created on March 27th, with the Prime Minister as ex-officio Chairman and the Finance, Home and Defence Ministers as ex-officio Trustees, bearing the name of the “Prime Minister’s Citizen Assistance and Relief in Emergency Situations Fund” (PM CARES Fund). Donations to this Fund are meant to be employed for financing expenses incurred in dealing with the covid-19 epidemic, and are eligible for tax exemption. Corporates will have their contributions counted as part of their mandatory Corporate Social Responsibility (CSR) obligations, including the option of setting off any donations above the CSR limit against future CSR liabilities. The States cannot do any of this.

We have already noted that there are arrears due to the States in the matter of revenues from GST, and these were now heightened by a huge slowdown in business and hence in the generation of sales tax revenue, though some reversal appears to have occurred with relaxation of economic activity in the third phase of the lockdown. The Center has already impounded the beneficial effects of an oil price drop by hiking the oil tariff. The States have nowhere to turn, and are increasingly dependent on the Center — or on hastily placed tax hikes on alcohol retail outlets; see, e.g., [9] — for desperately needed funds. None of this was visibly addressed in Plan 1.

One would be forgiven for imagining that in a situation of such apparent constraint, external sources of funding would be welcome. And indeed, the International Monetary Fund has mooted the issue of liquidity in the form of

Special Drawing Rights (SDRs) to the tune of 500 billion US dollars — only for the proposal to be vetoed (unsurprisingly) by the US and (surprisingly) by India, for the ostensible reason, in the latter case, of guarding against the possibility of some countries (presumably Pakistan) employing the funds for “extraneous purposes” (supposedly terrorist activity). Commenting on India’s response, Jayati Ghosh [30] writes: “Whatever may be the reason, this is a strategy that is not just fraught with risks but also illogical. Globally, it is a costly denial of a chance for the world economy to revive after this extraordinary shutdown. Internationally, it shows that India is willing to abandon the interest of the rest of the developing world, with little advantage to itself.”

The covid crisis comes on top of an already enfeebled economy, weakened by demand contraction and a generalized slowdown, with unprecedented levels of unemployment coupled with zero employment growth. There are technological and market forces behind these trends for which no individual Government can be held entirely responsible. That said, the state of the economy in the time immediately preceding the pandemic only heightens the extent of the necessary fiscal effort that now confronts the government in the post-lockdown situation, with its layered crisis of lives and livelihoods.¹³

Creative suggestions have been made to undergird that fiscal effort. For instance, Ayushi Bajaj and Gaurav Datt [8] propose one way of monetizing government debt whereby the Reserve Bank of India (RBI) buys up government securities, credits the government’s account with the purchase value of the securities, and then writes off the debt, so that the initial expansion of government debt and in the RBI’s balances are subsequently reversed. Generous public spending is even more urgently indicated if there are options available for resource mobilization which will not necessarily stretch the fiscal deficit to extravagant limits. One such option has been pointed out by Gurbachan Singh [75], who observes that India’s foreign exchange reserves are of the order of Rs. 35 tr — larger than might be dictated by considerations of abundant prudence. Plan 1 represented only 5% of these reserves, and Singh suggests that lowering their level by another 10%

¹³See also, in this general context, Agarwal and Srivas [5], Sainath [67], and *The Wire* [84].

should not be seriously problematic, especially with the option of implementing a regime of Pigovian taxes in the event of sudden and large capital flows. This would immediately add a fiscal stimulus of another 2% of GDP.

Invitations for discretionary donations based on philanthropic impulse are another source of funding. The Prime Minister's National Relief Fund (PMNRF), which was established in 1948, accepts contributions which are deployed for (among other purposes) providing immediate relief to families affected by natural calamities of various kinds. We've already mentioned the creation of PM CARES, a fund parallel to the PMNRF. That act was questioned by opposition political parties, and its constitutional legality was the subject of a Public Interest Litigation case, which was however dismissed by a bench of the Supreme Court.¹⁴ Subject to the Centre-State asymmetries that we have already highlighted, we would welcome voluntary contributions. But these, by definition, are discretionary donations, as opposed to taxes—which are mandatory, have the force of law behind them, are an expression of public entitlement to private income and wealth, and have to be accounted for with transparency. Taxation is therefore a source of funding which, one might have thought, immediately suggests itself. Indeed, this is the subject of a very interesting recommendation in the European context by Camille Landais, Emmanuel Saez and Gabriel Zucman [48], who write:

"European governments have reacted swiftly to the COVID crisis and are now discussing ways to mutualize the cost of the epidemic. This column proposes the creation of a progressive, time-limited, European-wide progressive wealth tax assessed on the net worth of the top 1% richest individuals. If fighting COVID-19 requires issuing 10 points of EU GDP in Eurobonds (or a rescue fund worth 10 points of EU GDP), a progressive wealth tax would be enough to repay all this extra debt after ten years."

Following this line of reasoning, one of us [87] used the Hurun India Rich List data on the net worth of 953 wealthiest entities with a net worth in excess of Rs. 10 billion each, around USD 135 million at current exchange rates. The

¹⁴The accounts of the PM CARES Fund will be examined by private auditors, and not by the office of the Comptroller and Auditor General of India.

exercise involved computing the effect of a tax on the wealth of just these entities. Together, they account for less than 0.0004% of all households in India, but a 4% tax on their wealth would yield a revenue which is 1% of GDP, a remarkable fact. This prescription would, of course, require legislation for the enactment of a wealth tax, which was formally abolished in the Union Budget of 2016–17.

Of related interest are the suggestions made by a group of Indian Revenue Service (IRS) officers in a report entitled “Fiscal Options & Response to Covid-19 Epidemic” (or FORCE), which was released to the media on the Twitter handle and website of the IRS Association. Among other recommendations made in the FORCE report are that the marginal income tax rate on incomes exceeding Rs. 10m per year should be raised from 30% to 40%, that a one-time “Covid Relief Cess” of 4% should be levied on taxable incomes exceeding Rs.1m per year; and that a wealth tax should be re-introduced on the “super rich,” defined as those with a net worth of Rs 50m or more [41].

The government’s response to this report and its recommendations has been—to put it neutrally—extraordinary. According to a report filed in *Scroll.in*,

The Central Board of Direct Taxes [on April 27th] issued chargesheets against three senior Indian Revenue Service officials, involved in preparing and publicising a report on increasing income tax . . . The three officials, at the rank of the principal commissioner, have been suspended [and] have been given 15 days to file a written reply in their defence and are supposed to convey whether they want to be heard in person . . .” [81]

No comment is necessary, or (in our case) possible.

5.5. The Indian Government’s Relief Plan 2. On May 12, Prime Minister Modi announced that a new relief plan would be unveiled by the Finance Minister, Nirmala Sitharaman, over the following days.

Plan 2 envisages an expenditure of around Rs. 20 trillion (or around USD 270 billion), more than 10 times the amount in Plan 1, and amounting to around 10% of Indian GDP. The exact break-up of this amount, or the precise nature

of the accounting involved, is not completely clear at the time of writing. The components of Plan 2 were specified by the Finance Minister in five tranches over five days following the Prime Minister's March 12 announcement. These can be summarized as follows, in line with the break-up provided by *The Mint*; see Dasgupta and Kumar [18]:

Tranche 1, Rs. 5.95 tr; Tranche 2, Rs. 3.10 tr; Tranche 3, Rs. 1.50 tr; Tranches 4 and 5, Rs. 0.48 tr, coming to a total of Rs. 11.03 tr.

Where does the remainder of the Rs. 20 tr package come from? It turns out that included in Plan 2 package are the Plan 1 provision of Rs. 1.7 tr, revenue losses from certain tax concessions made after March 22nd amounting to Rs. 0.078 tr, and a sum of Rs. 0.15 tr for the health sector which had been earlier announced by the Prime Minister. But most significantly, the package also includes huge prior infusions of liquidity by the Reserve Bank of India, totaling Rs. 8.02 tr. These additional elements aggregate to Rs. 9.95 tr which, when added to the 11.03 tr from the earlier-mentioned 5-tranche announcement, yields Rs. 20.98 tr, the ostensible size of Plan 2. From what we can gather from various sources, the following are some salient components of the package:

1. Collateral-free loans to Micro, Small and Medium-Scale Enterprises (MSMEs) up to Rs 3 tr and an equity infusion of Rs. 0.5 tr, with an additional Rs. 0.20 tr in loans to stressed MSMEs;
2. Rs. 0.9 tr for power distribution companies, Rs. 0.3 tr of "special liquidity" for non-banking financial institutions (NBFCs) and Micro-Finance Institutions (MFIs) and a Rs 0.45 tr. partial credit guarantee scheme for NBFCs, housing finance companies (HFCs), and MFIs with low credit rating.
3. Liquidity relief through reduction in Tax Deducted at Source (TDS) and Tax Collected at Source, valued at Rs. 0.5 tr, and "expedited" income tax refunds of Rs 0.18 tr.
4. Concessional credit of Rs 2 tr for 25m farmers, fishermen and animal husbandry farmers under PM-Kisan.

5. Additional emergency working capital of Rs. 0.3 tr for farmers through the National Bank for Agriculture and Rural Development.
6. Extension of the Credit Linked Subsidy Scheme for the housing sector and middle income group, amounting to Rs. 0.7 tr;
7. A special credit facility for street vendors, amounting to Rs. 0.05 tr;
8. Employees' Provident Fund support for businesses and workers, amounting to Rs. 0.025 tr;
9. Promotion of Affordable Rental Housing Complexes for migrant workers and the urban poor, in a scheme whose physical contours and fiscal provision are as yet not quite clear;
10. Foodgrains for non-ration card holders (5 kg of wheat/rice per person and 1 kg chick-pea per family) for 2 months, intended to cover 80 million migrants, amounting to Rs. 0.035 tr; and allowance for the use of ration cards anywhere in the country, with financial implications which are not yet clear;
11. An additional Rs 0.4 tr to be allocated to NREGA employment, over and above the earlier budget estimate of Rs 0.61 tr for fiscal 2021.

The money for migrants will be provided to State governments, and District Collectors and Municipal Commissioners will have access to this money. Other features of Plan 2 include an extension of the due date for tax returns, to November 30, relief from regulatory penalties for real estate companies for up to six months, an emphasis on "buying domestic" — the banning of global tenders for government procurement contracts up to Rs. 0.002 tr — and an expansion of the definition of MSME by raising the thresholds for inclusion in these categories.¹⁵ If we add all the amounts above, we obtain a total of Rs. 9.55 tr, which accounts for nearly 87% of the 5-tranche announcement of Rs. 11.03

¹⁵For instance, the new threshold for micro-enterprise is investment up to Rs 1 cr and turnover under Rs 5 cr. The definition earlier was on investment criteria of up to Rs 10 lakh for services and Rs 25 lakh for manufacturing. For more detail, see <https://economictimes.indiatimes.com/small-biz/sme-sector/finance-minister-announces-revised-msme-definitions-no-different-between-manufacturing-and-service-enterprises/articleshow/75717694.cms>.

tr. This suggests that while the list above is conceivably not exhaustive (or is incompletely informed by particulars of the financial implications of all of its components), it cannot be far from being so.

Given that trillions are not part of our everyday mental accounting, the following comparisons might help. First, the *entire* relief Plan 1 package, even with its faulty accounting, is *half* of what the Government is planning to give to MSMEs as loans. Second, we can quickly calculate what would be needed to provide half of India's households with a minimum of Rs. 5000 each, which is a common estimate of minimum monthly needs. Using the figure of approximately 280 m households (247m is the number from the 2011 Census), this means that Rs. 0.7 tr would be needed per month.¹⁶ The resulting three-month total of around Rs 2.1 tr is, again, worth comparing with some of the items above. Third, in the matter of relief for migrant laborers, the PM Cares Fund allocates Rs. 0.01 tr to them, which is one-half the amount to be spent on ventilators, and is less than 0.06% of the new package of Rs. 20 tr. On the other hand, the new allocation of Rs 0.4 tr to NREGA could go part of the way towards helping returning migrants.

Finally, the fiscal component of this package is small and somewhat unclear. We wish to be very clear that we understand the need for both monetary and fiscal stimuli, as we have both supply- and demand-side problems on our hands. But supply-side alleviation serves at best as a temporary palliative while the demand constraint persists. One could counter with the view that a fiscal stimulus on its own has little value either, as long as the supply bottle necks continue. But it needs to be understood that the fundamental supply bottleneck comes today from the induced shortage of labor created by the covid lockdown, and the attendant chain reactions that have sprung from this shortage. This is a supply-side problem that — to the extent permissible by the pandemic — is either under our control, or not remediable through monetary easing. In any case, and at

¹⁶This roughly aligns with P. Chidambaram's estimate of Rs. 0.65 tr; see <https://www.financialexpress.com/india-news/chidambaram-urges-congress-cms-to-demand-transfer-of-cash-to-poor-families-during-meeting-with-pm-modi/1925437/>. Though we do not know how he arrived at this number, his final estimate is sensible.

the very least, we would hope for some balance across the fiscal and monetary realms.

At a stretch, we could count under “fiscal stimulus” *all* of the Plan 1 allocation of Rs. 1.7 tr, reduced, let us say, to Rs.1.3 tr to account for elements of double-counting alluded to earlier, the provisions for tax relief (Rs. 0.78 tr), the PM’s announcement for the health sector (Rs. 0.15 tr), the provident fund payments of Rs. 0.025 tr, the Rs. 0.035 tr provision for foodgrain to migrant workers without ration cards, and the entire new expenditure of Rs. 0.4 tr on NREGA, to arrive a bit south of Rs. 2 tr, which is around 1% of India’s GDP. (In fact, Barclay’s estimate of the actual fiscal impact of the package, at Rs. 1.5 tr, is even more pessimistic, and only 0.75% of GDP; see [78] and [74]. The rest of the items appear to be loans and liquidity injections from the Reserve Bank and from nationalized banks, or reductions in provident fund contributions and taxes deducted or collected at source. This strategy should be viewed in the context of a country already flush with liquidity, with banks very reluctant to on-lend (see the discussion in Section 5.3 on the macroeconomic aspects of the crisis).

6. Other Outcomes

6.1. Introduction. In what follows, we look briefly at some of the accompaniments to, and outcomes of, the lockdown. An important feature of the lockdown relates to the procedural aspects of its implementation—or more accurately, in the present context, its enforcement. We then consider three direct fallouts of the lockdown: supply chain disruptions in agriculture, the shut-down’s impact on migrant labor, and its consequence for other morbidities. Three further accompaniments to the lockdown have been the phenomena of communalization of the pandemic, caste discrimination, and domestic violence. These issues are also briefly reviewed.

6.2. Enforcement of the Lockdown. The Blavatnik School of Government of the University of Oxford has created an “Oxford COVID-19 Government Response

Tracker (OxCGRT)," which collates government policy responses to the pandemic, scores the stringency of such measures, and creates a "stringency Index" from these. The OxCGRT website is careful to point out that "this index simply records the number and strictness of government policies, and should not be interpreted as 'scoring' the appropriateness or effectiveness of a country's response. A higher position in the Stringency Index does not necessarily mean that a country's response is 'better' than others lower on the index." According to OxCGRT data, over the period April 1 - May 1, India is among the highest ranking countries in terms of its calculated stringency level.

India's high "stringency score" seems to reflect, in some measure, police action against "lockdown offenders." Several anecdotal cases (with visual back-up) are available of police beating up "transgressing" citizens with *lathis*, getting them to frog-march, forcing them to perform push-ups and sit-ups, and harassing street vendors. Distressing video-recordings of such acts are available on the *Scroll*.

The situation appears to have turned bad enough for The Editors Guild of India to lodge a protest against police assaults on working journalists, and for the Kerala High Court to take *suo motu* cognizance of alleged police excesses and seek a response from the Centre to its contention that

"Amidst the din of the pandemic that engulfs us all, our laws cannot remain silent. . . They must continue to operate so as to protect the rights of our citizens. It is well established in our jurisprudence that the fundamental right to life and personal liberty, under Article 21 of our Constitution, cannot be suspended even during an emergency. As the sentinel on the *qui vive*, this court must be alert to the cries of the citizenry, alleging violation of their Constitutional rights" [80].

The lockdown period has also seen the arrests of human rights activists and student leaders, with appeals to the country's law courts proving to be of little avail; see *The Wire* [85] and Yamunan and Daniyal [96]. That the lockdown may have been implemented not wisely but too well is suggested by the content of the next three sub-sections.

6.3. Supply Chain Disruptions in Agriculture and Urban Food Markets. One must expect that an inevitable concomitant of a thoroughgoing lockdown must be serious breaks in backward and forward linkages of supply. As mentioned before, Sudha Narayanan [58] provided an early diagnosis of supply chain failures in agriculture, and suggested how these might be dealt with. The extent of the disruption is described in a very instructive appraisal by Vikas Rawal and Ankur Verma [64]. The authors note that it was only on the third day of the lockdown, on March 27th, that the government clarified that agricultural production and market activities were outside the purview of the lockdown. By this time, it would appear that substantial damage had already been done to the supply chains in agriculture, as the following account, based on the work of Rawal and Verma, testifies.

An analysis of post-winter-harvest (*rabi*) market arrivals in 1,331 designated *mandis* (market trading points) over the period March 15 - April 14 for the years 2017, 2018, 2019 and 2020 reveals that there were serious shortfalls in these arrivals in 2020 for seven key food commodities, comprising foodgrains (wheat, chickpea, and mustard) and vegetables (potato, tomato, onion and cauliflower). The quantity of wheat sold over the first lockdown period of 21 days (March 25-April 14) in 2020 was found to be only 6% of the quantity sold over the same period in 2019; the corresponding figures for chickpea and mustard are 6% and 4% respectively. The performance of perishable commodities was somewhat better: even so, the declines in arrivals for onions, potatoes, tomatoes and cauliflower between 2019 and 2020 were of the order of 70%, 59%, 26% and 11% respectively.

Despite the (delayed) exemption of agricultural operations from the purview of the lockdown, supply disruptions could not be prevented because of the impact of the lockdown elsewhere, as Rawal and Verma note. Specifically, because of restrictions on mobility, labor from neighbouring villages and from migrants who typically returned to their villages in the post-harvest season was unavailable in sufficient quantity for the crucial activities of loading and unloading. Additionally, restraints on vehicular mobility severely compromised

the safe transportation of food commodities. In the event, aggregate demand shortfalls were matched also by aggregate supply shortfalls.

The case of urban food markets has been analyzed in an instructive contribution by Sudha Narayanan and Shree Saha [59]. A face-to-face survey of 50 food retailers at 21 locations in 14 cities across India suggests that a set of common problems faced by them during the lockdown included irregular supply, difficulty in access to transport, increased transport costs, labor shortages for loading and unloading activities, large increases in traders' prices, declining demand, and harassment of street vendors by the police. The resulting supply shortages have been reflected in rising wholesale and retail prices of food. Over a 28-day period of the initial lockdown and its extension (March 24-April 21), Narayanan and Saha have analysed daily price data for 22 food commodities—rice, wheat, wheat flour, edible oils, pulses, milk, potato, onion, tomato, sugar, jaggery, iodized salt and loose tea leaves—across 114 Centers in India. The data collected at the Centers by the respective State Civil Supplies Departments are published by the government's Ministry of Consumer Affairs, Food and Public Affairs.

Using the data described above, the authors construct a Food Price Index, both Wholesale and Retail, for the 22 commodities mentioned. Without entering into detail, we simply note here that over the 'pre-lockdown' period of February 22-March 23, both the Wholesale and Retail Price Indices constructed by the authors display a declining trend, and then a perceptibly increasing trend over the 'post-lockdown' period of March 24-April 21. This is despite the decline in aggregate demand already apparent in the pre-pandemic downward spiral of the economy and the further post-pandemic stress on demand. The demand side of the market should have predicted a decline in food prices. The short-term spike in price suggests that supply disruptions have more than compensated for demand declines, leading to presumably substantial rationing in quantities transacted in the market.

6.4. The Predicament of Migrant Laborers. India has a large mass of internal migrant laborers, estimated at at least 120 million persons and considerably larger

than the populations of the largest European countries.¹⁷ Most of these migrants are employed as low-paid casual workers in the informal sector. Considering annual migration flows, Clément Imbert [33] estimates — employing Census and National Sample Survey data — that there may be up to 22 million persons who have migrated over the last year in the country, around half of which are inter-state migrants. These numbers only represent *flows* of migrants, and there could be additional numbers from the stock of existing migrants who chose to return home when the lockdown is lifted. Certainly, one would expect the seasonal inter-state migrants to return in large numbers. Estimating the overall flow is problematic, but it can easily run to several million.

While permanent migrants generally come from all over India, seasonal migrants have more concentrated origins (see Imbert [33], Figure 2), coming from poorer states such as Bihar, Chhattisgarh, Jharkhand, Madhya Pradesh, and Odisha. Their destinations are the mega-cities, where large-scale work (principally in construction) is available. We have already remarked on the large recent spike of cases in the covid epidemic in some of these states; see Table 2 and the discussion in Section 4.

The incentive for migrants to return is obvious. When the lockdown was announced with just four hours' notice on March 24th, migrant laborers knew they were facing the immediate prospect of being laid off from work, of not being paid their wage dues, and of facing a life without jobs, cash, food and shelter. The Centre for Monitoring Indian Economy (CMIE) reports that unemployment was at 23.5% during April 2020, well up from 6-9% in the 12-month period before, with every indication that unemployment would continue to climb into May (Vyas [95]). Figure 3 shows how the employment drop in April divided itself into various labor categories — small traders and laborers have been hit the hardest, with a drop of 91m in employment in a single month. (As a reference, total employment was already down to 396 m at the end of March [95])

¹⁷“Labor and Migration in India,” *Aajevika Bureau*, 2014, <http://www.aajeevika.org/labor-and-migration.php>.

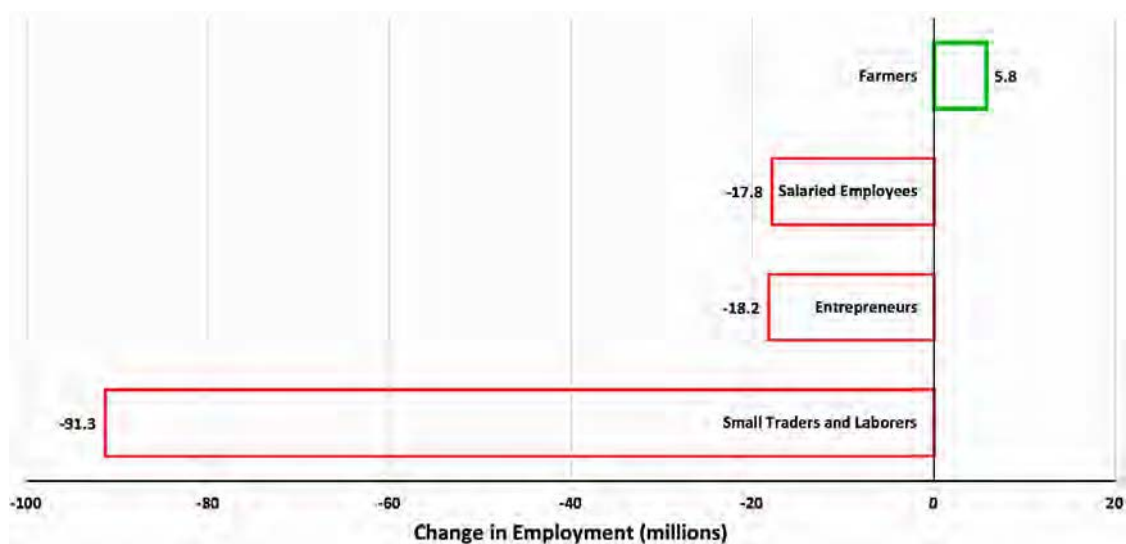


Figure 3. Employment Changes for Different Occupational Groups in the Month of April 2020. Source: Centre for Monitoring Indian Economy, <https://www.cmie.com/common/bin/sr.php?kall=warticle&dt=2020-05-05%2008:22:21&msec=776>.

It is important to note that migrant laborers from other states cannot avail themselves of PDS rations even if they possess ration cards made out in their names, if the cards relate to their state of origin and not their destination state. (Agarwal [3]). Most of these people would therefore not fall within the ambit of the relief provisions envisaged in the Covid-19 relief package announced by the government on March 27th. However, the second package announced by the government expands the PDS to cover these situations. At the time of writing we are not in a position to fully evaluate the implementation of this very recent measure.

With all inter-state bus and rail transport stalled by the lockdown, migrants in their desperation took to walking back to their homes, often hundreds of kilometers away from their present migrant destinations. A number of journalistic reports have described the suffering of these trekking migrants. Here is a small sample of the accounts available in these articles. An April 12th report by Jay Kishan Sharma [73] indicates that over 1,000 stranded migrant laborers from Odisha spilled out on to the streets in Surat (Gujarat) on March 30th, and

over 90 of them were arrested by the police for torching vegetable carts and vehicles in protest over the non-availability of transport to take them to their homes. When the second phase of the lockdown was announced on April 14th, some 3,000 migrant workers poured out on to the streets of Mumbai, seeking transport at the Bandra bus and railway stations, where they were caned in a charge by the police: there are estimated to be some 6 lakh migrants interned in make-shift shelters in several districts of Maharashtra; see Sukanya Shantha [72].

An earlier report filed by Shantha [71] on April 7 notes that 120 migrant laborers from Rajasthan who had walked for 6 days from Bengaluru, were detained and beaten up by the police in Valsad District of Gujarat on March 31st, packed into container trucks, and sent off to Palghar District in Maharashtra: the Gujarat police are supposed to have initiated an enquiry into the event. On March 28th, thousands of migrant laborers who had trekked their way to Delhi en route to Uttar Pradesh thronged the Anand Vihar bus station in East Delhi in the expectation of being ferried over the Delhi-U.P. border, but the buses available were no match for the size of the exodus, and police resorted to blocking and breaking up the crowds [34].

Other reports (see, e.g., [79] and [83]) indicate that at least 22 persons belonging to migrant laborer families may, by that time, have died on their long marches home, for reasons of hunger, exhaustion or road accidents. The condition of stranded workers in different parts of the country is reflected painfully in the statistics that have been compiled by the Stranded Workers Action Network (SWAN) team [89], on the basis of their conversations with subsets of 16,863 stranded workers who have reached out to the team from Maharashtra, Karnataka, Delhi, Haryana, Punjab, and Tamil Nadu. The period covered is the duration of the lockdown till April 26th:

(a) *Remuneration.* The average daily wage of the workers was Rs. 380, and the median wage was Rs. 365. Only 6% received their full wages during the lockdown, while 78% were not paid at all.

(b) *Cash on hand*. More than 97% of the workers received no cash aid from the government; 64% had Rs.100 or less; 74% Rs. 200 or less; and 78% Rs. 300 or less;

(c) *Hunger*. 82% of the workers received no rations from the government, and 68% received no cooked food; 50% had food rations for less than a day, and 72% for less than 2 days.

It was only on May 3rd that the government announced the operation of special *Shramik* trains for persons stranded during the lockdown; [7]. According to government guidelines, the trains would be operated according to the requirements of state administrations. An issue that has created considerable consternation among commentators is the levying of train fare upon passengers, leading to one opposition party offering to meet the travel expenses of migrant workers; see Naqshbandi and Dutta [57].

Indeed, the plight of India's migrant laborers has been the subject of a Public Interest Litigation filed by two activists, Harsh Mander and Anjali Bharadwaj, seeking immediate payment of wages to the laborers. Apparently, the petitioners' concerns regarding the rights of those they were representing were not persuasive. After the final hearing on the case, the Supreme Court closed it by effectively leaving it to the discretion of the executive to act as it saw fit in the matter: "We call upon the respondent — Union of India — to look into such material and take such steps as it finds fit to resolve the issues raised in the petition;" see Mander [51]. Notwithstanding this, the predicament of migrant workers after the lockdown has been widely regarded as a serious human rights issue, on which there has been a fair amount of reporting and commentary in the international press as well; see, for instance, Slater and Masih [77], or Ellis-Petersen and Chaurasia [21].

6.5. Labor Laws. Even as migrant laborers started returning to their homes in the special *Shramik* trains alluded to earlier, the state of Karnataka suddenly suspended the operation of these trains, apparently in response to the demands of the building-and-real-estate-lobby that migrant workers ought to be retained

within the state to facilitate revival of construction activity. (The suspension was revoked after a public outcry against the move; see Kulkarni [47]. Similarly, employers' associations such as the Confederation of Indian Industries, the Federation of Indian Chambers of Commerce and Industry and the Associated Chambers of Commerce and Industry of India (ASSOCHAM) have begun clamoring for various dilutions of the law relating to labor (Press Trust of India [35]). State governments have not been slow to respond to these demands: already, Rajasthan, Punjab, Himachal Pradesh and Gujarat have decided to increase the length of the working day from 8 hours to 12 hours, and of the working week from 48 hours to 72 hours; in Madhya Pradesh, provisions relating to working conditions and to appointment of a labor welfare officer have been relaxed; and in Uttar Pradesh, all but a few basic labor laws will stand suspended. These measures are expected to be in place for finite periods of time, from 2-3 months to 2-3 years; see Jainani and Ray [38]. These moves represent an upending of an entire global history of the struggle for workers' rights, and are a stark example of our thesis of a political economy in which the interests of those that are neither noticeable nor significant in the scheme of things are traded for the interests of those who are visible and consequential.

6.6. Other Morbidities. One further serious consequential impact of a covid-related lockdown is its impact on other morbidities, a matter of considerable concern to those public health experts who have had an eye on the global South. So, for instance, Vikram Patel [63] points out that 1,000 people die of respiratory tract infections *every day*, a problem that could be rendered worse by contagion arising from people being confined to homes which are often tiny and insanitary habitations. A lockdown also imposes restrictions on mobility, makes transport costly and curtails access to curative facilities, even as it contracts the availability of health staff and physicians in hospitals. Thus chronic ailments like diabetes, cancer and heart disease are liable to be edged out of the ambit of routine care. And mortality from suicide and trauma from domestic abuse must be expected to increase. A further major casualty is the routine activity of immunization. Tuberculosis is, or should be, a source of great worry, on which Madhukar Pai

writes [60]: “The global Covid-19 response will likely result in diversion of healthcare workforce and resources away from routine TB services, or reduction in the number of health workers because of illness and self-isolation.”

6.7. Coronavirus, Religion, Caste and Gender. There are at least three events preceding the epidemic which have had a role to play in communalizing it along religious lines. The first is the remarkable and peaceful sit-in protest conducted mainly by Muslim women in the East Delhi neighbourhood of Shaheen Bagh against the government’s initiatives on the controversial Citizenship (Amendment) Act, the National Register of Citizens and the National Population Register. The second is a highly communally charged election campaign launched by the BJP in the month leading up to the Delhi Assembly election of February 8th (which the BJP lost). The third is the violent communal violence unleashed toward the end of February in Delhi, which claimed 53 lives of which more than two-thirds were Muslim. These events set the stage for communalizing the coronavirus epidemic that unfolded around the same time.

Two episodes of salience must be mentioned in this connection. The first has to do with a religious gathering of the Tablighi Jamaat sect in the Nizamuddin area of Delhi: many of the participants in the gathering were identified as covid-infected, and they were traced and quarantined. Through fake news and pliant media cooperation, it has since been put out that the Tablighi incident is part of a deliberate Islamic conspiracy to infect the Indian population with the coronavirus. For two detailed accounts (among others), see Jain [37] and Daniyal [17]. A second episode has to do with the mob lynching on April 16th of three people (of whom two were Hindu monks) in Maharashtra’s Palghar district. Despite the arrest of people who were declared by the State Government to belong to the same community as the victims, a campaign of innuendo has been launched implicating members of the minority community and specific leaders of opposition political parties in the crime; see Patel [62].

In major national catastrophes, Dalits are often among the most badly affected groups. The covid-19 pandemic has proved to be no exception. A survey

conducted in Tamil Nadu by the research collective *Vaanavil* has found that Scheduled Caste persons working as construction workers, loaders and sanitary workers have not been paid wages on MNREGA work programs, and have not been beneficiaries of State and Central Government cash relief payments to which they are entitled.; see Tiwari [92]. Matters do not appear to be much different in one of India's premier universities. A report by Bose [13] states: "While the rest of the capital practices social distancing and stays indoors, sanitation workers who clean the 18 hostels and messes of the Jawaharlal Nehru University claim they have not been paid three months' wages. Despite being made to come to work amid the national lockdown, the workers have neither been provided with any protective gear such as masks or gloves nor do they have the luxury to opt for work from home or leave without pay."

Women are made to carry a disproportionate burden of the negative effects of an epidemic-induced lockdown. Ashwini Deshpande [19] observes that women are more vulnerable to job-losses than men; that those women who are required to 'work from home' during the lockdown, when domestic helps are also bound by it, will likely carry the double-burden of enhanced domestic work; and that women are also exposed to the risk of domestic and intimate party violence during a period of enforced joint cohabitation. Nalini Gulati [32] reports that according to the National Commission for Women there has been a sudden spurt of complaints — in the form of 123 emails — of domestic abuse in the lockdown period between March 23rd and April 10th, and that similar worrying trends have also been registered by women's commissions and state governments such as those of Kerala and Punjab.

7. Conclusions

This brings to an end our interim report on India's lockdown experience. It is relevant now to return to Sections 2 and 3 of this essay ("The Philosophy of Lockdown" and "Lives versus Lives: The Visible and the Invisible"). We use these to revisit the conceptual core of a proposal for a relatively relaxed

lockdown that was earlier advanced by Ray, Subramanian and Vandewalle; see [65] and [66]. In these articles, we pointed to certain features of the Indian economy — its occupational structure, and the prevalence of poverty, inequality and informality — which could cause a prolonged and indefinite lockdown (*sans* safety nets) to wreak the harshest consequences on the well-being of the poor laboring classes. Our understanding of the covid-19 epidemic was that it is a relatively “low fatality-high contagion” disease whose most adverse impact is on the old-age (60+) population, which accounts for a relatively small proportion in developing societies like India, unlike in economically advanced countries such as those in Europe and North America.

Ray, Subramanian and Vandewalle consider a relatively “relaxed” version of a lockdown which (a) allows for individuals of working age, but no older than 45, to work; (b) provides for special public (State-sponsored) care for the aged population while also leaving such care to be provided by the forces of private incentives and motivations at the individual household level; (c) ensures, crucially and indispensably, the organization of the most extensive antibody testing as such testing becomes widely available, and as antibody stocks in the population build up; (d) slowly brings older people into the workforce as the disease becomes less pervasive, and (e) guarantees compensating welfare measures from the State to enable the particularly vulnerable populations (the poor, and casual and informal-sector workers) to tide over the immediate and secular damage done by a lockdown to their lives and livelihoods. Furthermore, measures such as mask-wearing, physical distancing, and the avoidance of crowded gatherings (to the extent possible) would continue in full force.

David Katz, a physician, in an early communication [44], writes:

“I am deeply concerned that the social, economic and public health consequences of this near total meltdown of normal life — schools and businesses closed, gatherings banned — will be long lasting and calamitous, possibly graver than the direct toll of the virus itself . . . The unemployment, impoverishment and despair likely to result will be public health scourges of the first order.”

In seeking to quantify the benefits and costs of country-wide lockdowns in advanced and developing economies, Zachary Barnett-Howell and Ahmed Mushfiq Mobarak [10] are sceptical about the virtues of comprehensive lockdowns in poorer countries:

“Given the deeper concerns about the risks that economic shutdowns pose on the most vulnerable members of low-income societies. . . , it remains unclear whether the value of mitigation and suppression policies in poor countries outweighs the uncertain economic costs.”¹⁸

In similar vein, Joelle M. Abi-Rached and Ishac Diwan [1] write:

“In a recent opinion piece, the economists Debraj Ray and Sreenivasan Subramanian have broken the taboo by noting that India cannot afford to let people lose their livelihood and simply die of famine . . . The main risk of imitating the rich and imposing harsh but unworkable lockdowns is that the effort would crowd out scarce public capacity that can be better put to use elsewhere where it can make a difference.”

Jayaprakash Muliyil, also a physician and one of India’s most distinguished epidemiologists, has this to say:

“Suppression is not going to work in India in my opinion . . . In India, suppression would mean hurting each other, exploitation, giving power to wrong kinds of people. That is not my response to a public health emergency . . . This is going to be a long haul. You have to be sensible about it . . . [I]f you apply drastic measures, people will rebel if they don’t have food and milk for their children — and healthcare for other ailments” [54].

¹⁸See also, in this connection, Loazya [50].

It is easy enough to provide several more references in this vein.¹⁹ The question is, then, why we observe the forceful emphasis on a draconian lockdown. We claim that it is precisely because covid-19 poses a *visible* threat that the elites of India all know about, *and are vulnerable to*. In catering to these fears, the Indian Government also obtains international recognition as being on the frontlines against the pandemic. Moreover, for the elites, a lockdown is often not much more than a loss of cleaners and maids. But there is a price to be paid, which are the horrors and privations that the poor and truly vulnerable of India must endure as their livelihoods fail, often succumbing to these with their invisible lives. That invisibility is only in part due to poverty. In greater part, it is because non-covid deaths are diffuse; they are classified under a multitude of headings, and so lack the capacity to attract focal attention.

A tight lockdown accompanied by humane welfare compensation for the citizenry adversely impacted by its provisions can avoid some of the greatest human costs, and for that reason it may dominate a relaxed lockdown. In this sense, we do not come to the same conclusion as the libertarians, mask-spurners, and business interests in the United States who are asking for an immediate end to the lockdown because economic activity and individual freedoms come above all else. The argument for developing countries is different. It is that the welfare compensation in question may not be forthcoming to an adequate degree.

It therefore strikes us being a bit otiose to suggest, as some commentators have done, that the emphasis ought to be on “lives *and* lives,” as opposed to “lives

¹⁹Here are just three more examples. Alex Broadbent and Benjamin Smart [14] write: “We are putting in place measures that will lead to malnutrition and starvation for millions of people, and for these horrors, children and especially infants are the most at risk. And very many of those infants are born, and will die, in Africa.” Vikram Patel, a doctor and public health specialist, expresses a similar point of view [63]: “When one balances the vast uncertainties about Covid-19 when the lockdown was imposed . . . with the absolute certainty that such a lockdown would massively disrupt the lives and well-being of most of our population, it is hard to conclude that such a preemptive strike was justified.” And Julian Jamison [39] observes: “Policymakers everywhere may be tempted to focus on the immediate fatalities from covid-19 while eliding the equally real but more remote mortality from malnutrition, psychological distress, extreme poverty and sociopolitical unrest that lockdowns and economic disruption can cause. Yet the dangers of the latter are far sharper in the developing world . . .”

versus lives," or that one needs to attend to both the problems of checking the pandemic and the distress caused by a lockdown. Who would disagree? Certainly not we. Indeed, as this review has shown, there *is* attention to such suggestions (on a scale and with a wealth of knowledge that is truly admirable), but it can all come to nothing if there is both inability and unwillingness on the part of the policy establishment to implement such safety measures. Given the short-run inelasticities of supply (especially in the matter of health infrastructure) and genuine feasibility constraints, it would be sensible to view the problem from a "lives versus lives perspective" *even* in the context of a capable and completely well-intentioned State. But when the latter presumption is misplaced, as our review suggests it is, the perspective we speak of *a fortiori* gains even more credibility. In well-accepted economic terminology, a relaxed lockdown is an instance of a "second-best policy," which in no way exonerates laxity in State action. It is not a perfect substitute for competent State intervention.²⁰

In summary, this essay's assessment of post-lockdown developments in India suggests that a "lives versus lives" perspective on the covid-19 pandemic, which is relevant for any lockdown-mediated policy response in a developing country like India, is magnified significantly by the lack of adequate State intervention in the cause of welfare-support. Indeed, that perspective only becomes sharper in the context of a State focused on visibility²¹ and "optics,"²² on being *seen* to be acting in the interests of the articulate and influential sections of society,

²⁰For a useful account of what the state can do with, and must spend on, the public health system in order to make a relatively relaxed lockdown possible, see Muralidharan [55].

²¹The notion of "visibility" applies also in other contexts. For example, Amartya Sen has noted in many of his writings on famine that starvation deaths in a time of famine attract a great deal more attention than do regular, "orderly" deaths due to undernutrition. Similarly, sporadic state action on regulating child labour in "hazardous occupations" such as fireworks attracts more immediate attention than would a long-term, systematic engagement with the phenomenon of "school-less-ness" and child work in family activities.

²²On May 3rd, Indian Navy and Indian Air Force (IAF) helicopters showered rose petals on hospitals treating covid patients, and IAF planes conducted flypasts ostensibly to convey gratitude to the health staff battling the epidemic, even as migrant laborers have to buy their train tickets to eventually get back home, and health workers have to struggle without adequate personal protective gear.

and when this orientation is aided by the timorousness or complicity of the institutions of democracy.

What we have put together is no more than a collation of the hard and conscientious work done by several commentators—not least by journalists, reporters and opinion-writers—on the course of the coronavirus epidemic over the last few weeks. That it has been possible at all to write this interim report is due precisely to such sterling effort invested by so many people, to whom a great debt of gratitude is owed, and will continue to be owed as they continue to track the events which will unfold in the weeks and months to follow. It is obvious that our record has no merit of originality, but it is hoped that the effort of assembling widely scattered material on a number of issues into one cognate account will be of some little use in enabling all concerned actors to pause, reflect, and take stock.

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