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Covid-19 and the poor

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Abstract

COVID-19 not only highlights existing inequalities, it exacerbates them. Not only do the poor have higher COVID-19 infection and mortality rates, they suffer disproportionately from curtailment measures. As governments try and flatten the infection curve, the misery curve measuring the loss of incomes, livelihoods and lives has been rising. These costs tend to accelerate the longer the lockdown is in place, contributing to an increase in violations that can reduce the effectiveness of the measure itself. In countries without broad-based safety nets, it is no longer a choice between lives and livelihoods because they are the same for the poor. While developed nations debate the trade-off between saving lives and destroying livelihoods, poor countries must consider the trade-off between lives lost through destroyed livelihoods and lives lost to the virus. These ground realities suggest that targeted, time-bound measures rather than prolonged general lockdowns should be considered in poor countries, should infections start rising, while increasing targeted testing.

COVID-19 and the Poor

*Jayant Menon**

1.0 Introduction

On 29 December 2019, Chinese authorities identified a cluster of similar cases of pneumonia in the city of Wuhan, capital of the Hubei Province in China. These cases were soon determined to be caused by a virus called severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), which causes the disease called coronavirus disease (COVID-19). After more than seven months since the first cluster of COVID-19 infections were identified, about 17 million infections and almost 700,000 deaths have been reported worldwide. Recently, these numbers have been increasing at an increasing rate in some countries and regions, heightening concerns over uncontrollable exponential spread there. In the Association of Southeast Asian (ASEAN) countries, there are almost 280,000 reported infections and 7,500 deaths. In ASEAN+3, which includes the ten member countries of ASEAN plus China, Japan and South Korea, the reported numbers increase to 315,000 infections and 13,500 deaths.[1]

There is a lot that remains unknown about the virus, mainly because it continues to evolve in uncertain ways. Despite that, a lot more is now known about how the virus is affecting different countries and communities, as well as how policy responses to contain the spread of the virus is impacting different groups within society. This paper examines the impact that the virus, and the different types of social distancing measures implemented to try and contain its spread, is having on the more vulnerable groups within society, particularly the poor.

Most natural and man-made disasters, from earthquakes to climate change to financial crises, have a disproportionately large negative impact on the poor and other vulnerable or marginalised groups. Pandemics like COVID-19 are not an exception. Although COVID-19 may be an "equal opportunity infector"[2], the poor are more susceptible to infection and to succumbing to it if infected. The poor are also likely to bear a disproportionately high share of the burden of safe distancing or curtailment measures designed to curb the spread of the virus. COVID-19 not only highlights existing inequalities and disparities, it will exacerbate them. Therefore, informed policy making that considers these ground realities and how they affect costs and benefits is critical especially in countries with high proportions of the poor, and where safety nets are likely to be weak.

Unfortunately, limited testing capabilities is another feature of being poor, and prevents the assembly of data required to make such informed decisions. Fear of the unknown, coupled with the

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[1] There is great variation in both infection and mortality rates across Southeast and East Asia. While China, the original epicentre, had the highest number of deaths in the region to begin with, it has stabilised and the current death toll stands at about 4600. Indonesia currently has the highest number of deaths in the region at 5200, followed by the Philippines (2,100) and then Japan (1000). Both Indonesia and the Philippines report having more than 100,000 infections, and cases have been rising rapidly of late.

[2] See Levy (2020), quoting Larry Brilliant.

potential for exponential spread, is leading governments in poor countries to err on the side of caution and employ draconian measures. Lockdowns are being extended for prolonged periods because the data required to support a safe lifting of the measures cannot be collected, even though the same data deficit means that extensions may not be justified either. The costs of lockdowns on the welfare of the poor is rising, and can accelerate the longer they are in place, in the absence of income support.

The infection curve finds its counterpart in the misery curve, which measures the loss of incomes and livelihoods, contributing to long-term and sometimes irreversible harm. This makes prolonged lockdowns not only a potentially erroneous policy instrument for minimising overall harm, it is also likely to render them ineffective as implementation is compromised as violations increase. This suggests that there may be a need, over time, to ease certain restrictions that inflict significant misery on vulnerable groups. Otherwise, the probability of violations may increase to the point where it could compromise the overall objectives of the lockdown, leaving behind health and economic crises that together approximate a humanitarian disaster.

The paper is in six parts. In the next section, we look at the factors that place the poor at greater risk of infection, as well as why mortality rates are much higher. Many poor countries with low reported infection rates were quick to impose lockdowns, and have extended them several times. Section 3 examines why this has been happening. Section 4 introduces the concept of the misery curve to explain why the poor suffer more from lockdowns, and are therefore more likely to violate them, reducing the efficacy of such measures in poor countries. That being the case, Section 5 considers ways in which to keep both the infection and the misery curve below their tipping points, through targeted easing of safe distancing measures. A final section concludes.

2.0 Why the poor are at higher risk

The poor are a heterogeneous group with significant variation in susceptibility. The urban and peri-urban poor face much higher risks than the rural poor, especially in the early stages of the spread. Living conditions for the rural poor are generally less congested, and work such as subsistence farming would involve less physical contact. The urban or peri-urban poor employed in service sectors such as transport or construction may find social distancing difficult to implement. Urban slums are generally defined by their congested and unhygienic conditions, and can be hotbeds for the spread of all kinds of disease.

There are other traits associate with being poor that increases their vulnerability. These include being homeless, jobless (in the formal sector) and/or stateless (eg. undocumented migrant workers). In ASEAN for instance, it is estimated that there are more undocumented migrant workers than there are documented ones.[3] As illegal workers, they are denied any kind of social protection. If the aged and immune-compromised are the most at risk of succumbing to the virus, then the

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[3] Given their nature, there are no official statistics on undocumented workers, although various surveys have been done to try and estimate the numbers in ASEAN. The Malaysian Employers Federation, for instance, estimated the number of undocumented workers at 3.3 million, 150 percent higher than documented ones. World Bank (2019) highlights the large variation in estimates in Malaysia, with unofficial data suggesting that the number of undocumented workers could be as high as 4 million. See also Thuzar (2018) .

undocumented migrant workers are the most vulnerable, to both infection and spread, as they are often as 'invisible' as the virus itself.[4] The surge in infections in Singapore amongst (documented) foreign workers in crowded dormitories raises concerns that undetected outbreaks could be occurring elsewhere in ASEAN, amongst documented and undocumented migrant workers living under similar conditions.

While COVID-19 may have introduced the developed world to the importance of proper hand washing to avoid infection, it has long been recognised as an important part of preventing disease in the developing world. The United Nations Children's Fund (UNICEF) and World Health Organization (WHO, 2009) estimate that up to 40 percent of often deadly diseases could be prevented by proper hand washing, if the poor had access to running water. But with a third of urban populations living in slums, and 1 in 5 people under 17 years being excluded from education[5], the poor lack access to clean water and the requisite knowledge to practice even proper hand washing. The general lack of education amongst the poor combined with limited access to information and communications technology further increases their risks.

Not only are the poor more prone to infection, they are also less likely to recover from it if infected. There are a number of reasons why the poor are likely to have higher infection-fatality rates. Years of poverty-induced malnutrition and poor diet weakens immune systems and the ability to fight off viral and other infections. This is particularly problematic since the poor tend to have less access to medical and healthcare services, increasing the probability of secondary infections. In fact, it is unlikely that many of the poor will be tested until symptoms are so severe that the chances of recovery are compromised. In ASEAN for instance, the mortality rate in its richest member, Singapore, is 0.075 percent, compared to about 6.5 percent in Indonesia and the Philippines, two of its most populous members with a high proportion of the poor.[6]

3.0 Why poor countries with low reported infection rates prolong lockdowns?

Countries and regions with the highest reported COVID-19 infection and mortality rates had imposed lockdowns in an apparent attempt to flatten the (infection) curve — to slow its spread so that healthcare systems can cope with the increase in patients (see Figure 1). It is important to be clear about what the lockdown aims to achieve, or what the process of flattening the curve is expected to produce. Lockdowns aim to change the shape of the infection curve, or the temporal distribution of infections, but not necessarily the area underneath the curve, or the total number of infections. That is, it aims to redistribute a given number of infections over a longer period of time and thereby flatten its peak or temper its spike. Unless the lockdown is meant to last until a vaccine is developed, it should not affect the number of people who are eventually infected. In fact, on the negative side, it could delay getting to herd immunity.

(Figure 1 about here)

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[4] Apart from the risk this poses to their health, it also threatens the curtailment measures of host countries.
[5] For more details relating to these data, see United Nations Statistics Division (UNSD, 2020).
[6] Based on data from Worldometer (2020), accessed on 20 May.

The containment of the virus in Wuhan shows that lockdowns can be effective in reducing infection rates, however. Although curbs were lifted after infection rates reportedly diminished, there has not been a second wave of infections – not so far, at least. If there is learning by doing, and social distancing behaviour acquired during the lockdown continues after its lifting, then infection rates could indeed be affected for prolonged periods. The question then becomes how long this learnt behaviour lasts beyond the lockdown. There are indications that behavioural changes are mostly transitory, depending on various social and cultural factors.[7] If this is the case, then this further strengthens the view that lockdowns can change the time distribution of infections but not the volume.

But excessively draconian measures may not always be necessary to achieve persistent, although not permanent, reductions in infections through behaviour modification. The experience of Hong Kong and Taiwan demonstrates that targeted social distancing measures that do not effectively shut down the economy can be just as successful in controlling the spread (see Cowling and Lim, 2020). Both countries appear to have contained the spread and have not seen a sharp increase in infections as of yet.

Even countries with relatively low infection and mortality rates are implementing lockdowns and increasingly draconian measures. For instance, Malaysia and Thailand extended their lockdowns into a second month to include May. By June, Thailand had reported only about 50 deaths from COVID-19, and Malaysia just over 100 (Worldometer, 2020).

These numbers do not suggest rampant community transmission. Why then are these and other countries with similar infection rates extending such draconian and costly measures?

It may be that governments do not trust the data, with limited testing revealing only the tip of the iceberg.[8] The gap between reported and actual infection rates is likely to be higher in developing versus developed countries due to limited testing in the former. Figure 2 shows that there is a strong positive relationship (correlation of 0.64) between the number of reported cases per million population and per capita GDP in purchasing-power-parity (PPP) terms for countries in Asia.[9] Since it is unlikely that immunity is higher in low income countries, the difference is most likely due to reduced detection because of lower testing.

(Figure 2 about here)

This view receives further support from Figure 3, which compares the number of tests per million population and per capita GDP in PPP terms. These two variables display an even stronger

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[7] Even in Singapore, where compliance is generally high, psychological fatigue, complacency or a false sense of security can quickly lead to breaches of social distancing measures and pre-pandemic behaviour (see, for instance, Chang, 2020).

[8] One of the key issues for the monitoring and control of the pandemic is the extent to which testing is capturing those who have the virus but do not exhibit symptoms. Since those displaying severe symptoms are more likely to be tested in poor countries, the reservoir of untested, infected individuals who display only mild or no symptoms will not strain the healthcare system as they will not require hospitalisation. They will, however, still pose a risk to the spread of the virus.

[9] For details relating to the country sample, see Morgan and Trinh (2020).

correlation of 0.72. The much lower rates of testing in lower-income countries implies that the number of cases in those countries is being substantially under reported. Governments are therefore unlikely to place much credence on reported infection rates in deciding on their response.

(Figure 3 about here)

Without reliable or adequate data, and given that reported numbers are unambiguously underestimates of the true situation, risk-averse governments could end up prolonging lockdowns beyond what is required to flatten the curve. Without adequate data, it is difficult to measure progress with flattening of the curve, and it can appear as if the lockdown will continue until the virus is eliminated or a cure is found.

Governments may also be guided by the adage that prevention is better than cure, especially when one does not exist, and domestic healthcare systems are weak. Flattening the infection curve and keeping rates in check is particularly important if the healthcare infrastructure cannot cope with a sudden increase in demand. Some governments that underestimated initial risks may also be over-reacting to try and catch-up or compensate, especially when lives are at stake. Despite the virus being less deadly than many other non-communicable diseases and even some communicable ones[10], the continuing uncertainty surrounding this new virus and its highly infectious nature may account for some of the overreaction. At the regional level, opportunities for rent seeking may also underlie requests for extensions in lockdown periods, if they are accompanied by income transfers from the centre that can be appropriated by local officials for personal rather than public gain.[11] Therefore, a combination of continuing uncertainty, incomplete information and politics is leading governments to err on the side of caution.

Whatever the reason, these measures are exacting a huge toll in economic and social terms. But how can we measure if they are justified?

Answering this question requires evaluating the benefits and costs of the lockdown. The main aim of a lockdown is to slow the spread of the virus, and it may be too early to tell the effects. Because the incubation period is between 2-14 days[12], what is reported today may reflect conditions in the past. Rising infection rates could also reflect increased testing rather than a failure of the measures. Case definitions, or how an infection is defined, can change over time, and when this change involves moving from a narrow to a broader definition,[13] then reported infection rates can increase without

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[10] For communicable diseases, see Harding and Lanese (2020). For non-communicable diseases, see Reddy (2020).

[11] In the Philippines for instance, the government has already received a total of 318 complaints against the supposed graft and corrupt practices of local officials in the distribution of cash aid to low-income households. So far, 23 village officials are facing criminal charges while 110 others are currently under investigation for alleged anomalies. See, for instance, Pulta (2020) and Cudies (2020).

[12] See the incubation period section in Worldometer (2020): https://www.worldometers.info/coronavirus/coronavirus-incubation-period/

[13] A change in case definitions generally involves a broadening rather than a narrowing of the classification. For instance, the National Health Commission in China changed the case definition for COVID-19 seven times between January 15 and March 3, 2020, and each time it involved a broadening of the definition (see Tsang iet al*., 2020).*

any underlying change in the spread of the virus. The lockdown may have limited the increase, but it is impossible to tell by how much. All of these factors complicate the measurement of benefits.

The costs are easier to estimate. There are countless estimates of impacts on economic growth under various scenarios, and how they filter through to changes in household incomes and poverty incidence.[14] A study by the United Nations University (UNU-WIDER, 2020) that focusses on the impact on poverty suggests that the UN Sustainable Development Goal of ending poverty by 2030 is at risk because global poverty could increase for the first time since 1990. Depending on the poverty line used, the increase could represent a reversal of approximately a decade in the world's progress in reducing poverty. In some regions of the world, the adverse impacts could result in poverty levels similar to those recorded 30 years ago. Under the most extreme scenario of a 20 per cent income or consumption contraction, the number of people living in poverty could increase by half a billion.

While the numbers can be disputed, it is clear that the safe distancing measures are having a major negative impact on economic growth, incomes and poverty in both rich and poor countries. But while most of the developed world appears to be succeeding in flattening the infection curve, a second phase is emerging where the spread is engulfing developing countries, with most of the new infections taking place in emerging or developing countries.[15] The large informal sector in poor countries that evade reported statistics suggests that impact estimates may be biased upwards, and that the true costs may be significantly higher. Workers in the informal sector are not eligible for any form of wage subsidy or employment guarantee or any other social protection measure associated with formal employment. Lockdowns also disrupt food supply chains, and can affect production and prices of staples. Since food constitutes a higher share of the budget of the poor, they will suffer disproportionately.

4.0 Why the poor suffer more from lockdowns

While countries try to flatten the infection curve, another curve measuring the costs and misery associated with curtailment measures is rising, and approaching catastrophic levels in poor countries. This **misery curve** measures the costs of curtailment measures that result in the loss of incomes, livelihoods and lives. The misery curve can vary by household but in general, it rises with the severity and length of curtailment measures and declines with the amount of compensation provided through safety nets.

If the infection curve is being flattened, it is not for the poor. In developing countries, many of the poorest may not be able to afford the healthcare that is being temporally rationed by this curve-flattening process. They will bear most of its unintended consequences however. The poor live hand-to-mouth, and lockdowns prevent the poorest from begging or scavenging for food, or the millions in the informal sector from earning a daily subsistence income. For the poor, especially the urban or

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[14] The IMF (2020a) for instance, predicted in April that world output would contract by 3 percent this year, resulting in the greatest recession since the Great Depression. In June, they revised the extent of the reduction in would output to 4.9 percent (IMF, 2020b).

[15] In May 2020, ten of the top 12 countries with the largest number of new confirmed infections were from developing or emerging economies, led by Brazil, Russia, India, Peru and Chile. The two developed countries were the US and UK. See Zakariah (2020).

peri-urban poor, it is quickly becoming a question of survival, in the absence of broad-based safety nets.

Both curves have threshold limits that when breached can result in rapid increases in social costs. For the infection curve, it is when the supply of healthcare is no longer able to cater to demand. But for the misery curve, it is when the harm caused by social distancing measures starts impinging upon health conditions or survival itself.

Each individual or household has its own misery curve because the impact of curtailment measures will vary depending on a host of characteristics, such as initial income, amount of savings or other liquid assets, living conditions (eg. in-house access to running water and proper sanitation) and the like. These characteristics determine the extent of the burden imposed by lockdowns. As these costs increase, so does the probability of breaches of the lockdown. While initial income will determine the original level or starting point of the curve, these other factors will affect the rate of increase or the slope of the curve over time.

After a prolonged period of lockdown, the time to rethink the balance between the two curves may have arrived in poor countries without adequate safety nets. Prolonged lockdowns can lead to more deaths from hunger or hunger-related illnesses[16] than from the virus, and cause other irreversible effects such as loss of physical and social assets. Long term effects such as lost months of schooling, health check-ups, and nutrition can be particularly high for children in poor families, adversely affecting their human capital development and earning potential, contributing to an inter-generational cycle of poverty. A large community of "new poor" will emerge in and around urban areas, while rural poverty will deepen further.[17]

5.0 The way forward

So, where does this leave us? Although the outcome of the cost-benefit exercise cannot be determined definitively, decisions need to be made about the future course of action.

The question facing developing countries is how much longer existing measures should remain in place. Lockdowns are inherently unsustainable and their costs rise at an accelerating rate over time. As the costs rise sharply, the efficacy of the lockdown itself is likely to be compromised, as discussed earlier. Brown *et al.* (2020) show that more than 90 percent of poor households in developing countries may not be able to comply with WHO recommendations because their personal and household characteristics prevent them from observing lockdown requirements.

For instance, if the household does not have access to safe drinking water within their premises, then they will be forced to break the curfew and wander to the closest public utility, where other

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[16] The Food and Agriculture Organisation (FAO, 2019) estimated that more than 820 million people were hungry in 2018, while about 2 billion suffered from moderate or severe food insecurity. This results in about 25,000 deaths per day from hunger or hunger-related illnesses. This daily average is more than 10 times that of COVID-19, based on data for about 5 months since the first case was reported in late 2019 (Worldometer, 2020).

[17] An increasing number of early studies are already pointing in this direction. See, for instance, Brown *et al.* (2020), Ravallion (2020), Sanchez-Paramo (2020) and literature cited therein.

poor may also congregate in breach of safe distancing rules. Since women generally undertake such household chores, they will be at higher risk than men. So, faced with the high probability of dehydration or starvation by remaining at home versus a relatively low probability of infection, and (multiplied by) an even lower chance of dying from that infection, the poor are likely to take calculated risks and find ways of violating lockdown restrictions to ensure their survival. The absence of a reliable source of energy may also make it difficult to comply with stay-home notices.[18] Therefore, it is unlikely that lockdowns can be effectively implemented over long periods of time in poor countries without adequate safety nets.

Given these circumstances, what is the best way forward? If lockdowns are likely to be breached the longer they are in place, then using them as a curtailment option could be counter-productive unless they are regularly reviewed. If lockdowns are kept in place for too long, their eventual easing could result in an explosion of activity due to pent-up demand, resembling a return to the "old normal", increasing the risk of a second wave of the epidemic. To overcome this, some epidemiologists propose rolling lockdowns or cycles of a 'suppress and lift' policy around the incubation period that can keep both the pandemic and social costs manageable (see, for instance, Leung, 2020). Therefore, targeted, time-bound measures rather than prolonged general lockdowns should be considered in poor countries when there is insufficient data to support either the safe lifting or extensions of lockdowns.[19]

Alternatively, might relaxing specific measures that have particularly large impacts on the poor reduce costs to reduce the probability of breaches? The relaxation of such measures could actually assist in achieving the objectives of the lockdown by reducing violations, rather than compromising it. It could also pre-empt a general and arbitrary easing of measures as lockdown fatigue inevitably sets in.

Consider Manila, where all transport except private vehicles is restricted during Enhanced Community Quarantine, the initial response by the government. This disadvantages the poor by restricting their mobility and access to essential services, and by removing livelihoods for millions employed in the public and private transportation sector. For the poor, getting to a public hospital may not be possible without public transport. During a lockdown, social distancing on public transport should be possible because congestion is unlikely. There could be other policies like it and we need to look harder and be prepared to take calculated risks, like Vietnam just did. With less than 300 infections and no reported deaths, Vietnam extended its lockdown to only 12 high-risk locations for up to the maximum incubation period of two weeks (Onishi, 2020). Pakistan recently extended its lockdown but reopened its construction sector, which employs millions of its poor, to ensure, in the words of its Prime Minister, that "people don't die of hunger" (Economist, 2020).

As countries start to ease restrictions, confirming the unsustainability of prolonged lockdowns, testing should be ramped up in sectors or occupations targeted for opening. Preferably, this should

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[18] For a more detailed discussion of these and other characteristics of poor households and how they affect the efficacy of lockdowns and home environments for protections against COVID-19, see Jones e*t al.* (2020) and Brown *et al.* (2020).
[19] Beyond the short run, and in order for decisions to be made based on data rather than fear, efforts to increase testing and data collection should be vigorously pursued.

be done prior to the easing taking effect, in order to minimise the risk of a second wave of infections.

The calculation of what constitutes a second wave of infections that warrants a reintroduction of restrictions needs to consider a number of factors. An increase in the number of cases alone should not provide an *a priori* basis for the return to lockdown. In fact, some increase in infection rates should only be expected as developing countries continue to build up their testing capacity towards desired levels over time. In addition, the easing of restrictions should also result in some increase in the number of cases, if the virus has not been eliminated, and this should not surprise. In short, some increase in the number of cases following easing of lockdowns should be expected in all cases expect where the virus has been eliminated, and may not warrant a reintroduction of the lockdown. After all, lockdowns were introduced, and justified, as an attempt to flatten the infection curve, not eliminate the virus.

Policy should only be reversed when there is a clear need to do so, and that would be when there are real signs that community transmission is beginning to rise rapidly, net of any increase attributable mainly to increased testing. Rising community transmission is reflected in a reproduction rate, or R_0, that is above 1, when measured net of any increase due purely to increased testing. An R_0 rate of 1 means on average each infected person will infect one other person they come in contact with. While it may be safe to ease a lockdown if the rate is below 1, because it implies that the epidemic is subsiding, a rate above 1 suggests exponential growth in its spread, and the possibility of overwhelming the healthcare system if left unchecked.[20] Once this is established with confidence, then the reversal should be swift and certain. But not before. Doing so prematurely or unnecessarily can be particularly disruptive and costly as they increase uncertainty and reduce confidence in a government's policy credibility.

If we initially erred on the side of caution, we now need to err on the side of reducing misery. The precautionary principle is increasingly becoming a luxury available to wealthy nations that can afford effective safety nets. While developed nations debate the value of a statistical life[21] in the trade-off between saving lives and destroying livelihoods, poor countries need to consider the trade-off between the number of lives potentially lost through destroyed livelihoods compared with those that could be lost to the virus.

6.0 Conclusion

The poor and other vulnerable groups have higher COVID-19 infection and mortality rates. The poor are also likely to suffer more from the unintended consequences of lockdowns than others. While countries try and flatten the infection curve, the misery curve has been rising as a direct consequence. Without broad-based safety nets, the integrity and effectiveness of a lockdown is likely to be compromised if the misery curve rises beyond a certain threshold level. This limit is likely to be breached the longer the lockdown is in place, especially once it exhausts the limited savings of (asset and income) poor and uncompensated households. The likelihood that the threshold will be breached increases when households do not have access to potable water and adequate sanitation

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[20] This assumes there is zero immunity in the community, which is what the "0" in R_0 stands for.
[21] For a non-technical discussion of the value of a statistical life, see, for instance, Harford (2020).

within their dwelling. And for the subset of the poor who also display other vulnerability traits such as being homeless, jobless and/or stateless (eg. undocumented migrant workers), the lockdown will quickly push them over the threshold since their misery levels were already high to begin with. These characteristics of the population should be considered in choosing and designing social distancing measures.

While it was understandable that governments should over-react in their initial response to a new and unknown threat to public health, that window has now closed after more than six months since the initial infections were reported. While a lot is still unknown about this evolving pandemic, there is a lot that is known that should guide policy making in response to the pandemic. It is time to consider options that can keep both the infection and misery curves in check. Focussing on one at the expense of the other is bad policy in all countries, but rapidly becoming untenable in developing countries. With the level of misery increasing faster than the data that measures it, calculated risks that limit imminent and foreseeable harm must be taken. The rate of increase in the level of misery may also preclude waiting for more comprehensive data on testing to enable better informed decision making. Therefore, we should be guided by the obvious and observable rise in misery when there is insufficient data from testing to support a safe lifting of the lockdown, or indeed its continuation for that matter. As lockdown fatigue inevitably sets in, the restrictions that cause the most amount of misery should be the first to be eased, but preceded by a targeted increase in testing to minimise the risk of a second wave of infections.

While the debate in developed nations on when to open up may be regarded as putting the economy over saving lives, in developing countries the question is how to balance the economy to minimise overall loss of lives. That is, it is no longer a choice between lives and livelihoods, as it is in Western industrialised countries, since it is often one and the same thing amongst the poor in countries without broad-based safety nets.

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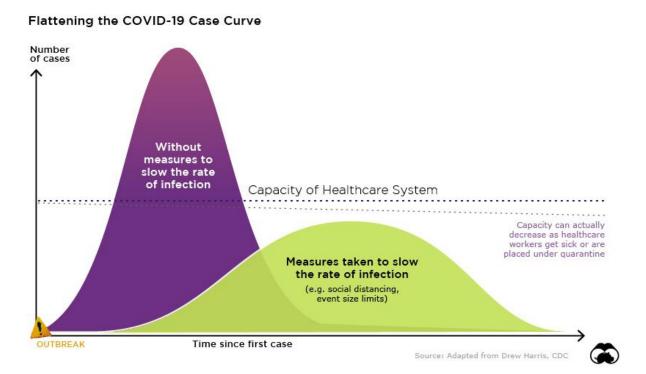
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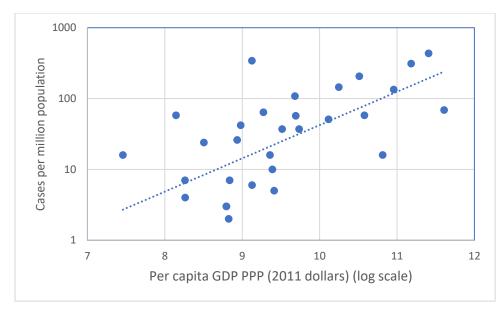
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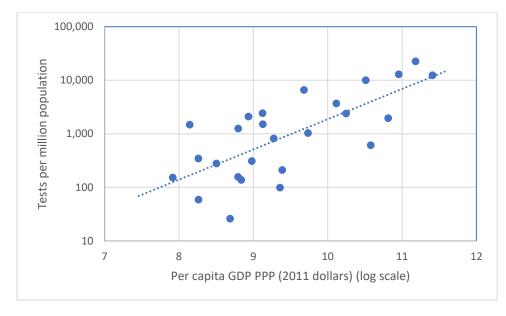
Figure 1

Flattening the COVID-19 Case Curve

Figure 2

COVID-19 cases per million population and per capita GDP in Asia

Source: Morgan and Trinh (2020), Worldometer (2020) and World Bank (2020).

Figure 3

COVID-19 tests per million population and per capita GDP in Asia

Source: Morgan and Trinh (2020), Worldometer (2020) and World Bank (2020).