

# The Tale of two Crises in the Time of Covid-19

Kumar Aniket  
Faculty of Built Environment  
UCL

Rashedur Chowdhury  
Southampton Business School  
University of Southampton School

9 June 2020

## Abstract

We document the challenges faced by a sub-district called Phulbari in Bangladesh during Covid-19 lockdown. We do so using a series of 24 interviews with a wide range of individuals conducted during May 2020. What emerges is a picture of an under-resourced local administration trying their best to cope with the situation. The local administration's efforts have been complemented by efforts of the civil society. While social distancing policies have potentially helped prevent a Covid-19 outbreak, it has created an economic crisis in its wake. We suggest some specific policy proposals that can help alleviate the economic crisis without risking an outbreak.

**Keywords:** Covid-19, Economic Development, Governance, Social Norms, Poverty, Pandemic

# 1 Introduction

With the lack of any available prophylactic for Covid-19, social distancing is the only course of action that can keep a population safe from an outbreak. Social distancing creates an equally severe crisis in its wake by taking away the livelihood of people. For the poor across the world who don't have savings to draw upon, the situation is even more precarious. While it is easy to obtain aggregate data about Covid-19 from across the world, a detailed picture of what is happening in different corners of the world is far more difficult to come by. We felt that we could contribute to the contemporary literature on Covid-19 by giving voice to a people living in a remote, almost forgotten, region of the world.

With a population of 176023 and a literacy rate of 52.4%,<sup>1</sup> Phulbari sub-district is typical of a rural district in the developing country. The district is largely rural and agricultural with a smattering of garment and jute factories. The headquarter of the sub-district is a densely packed urban municipality area where approximately 20% of the population of the sub-district resides. While there has not been an outbreak Covid-19 in the area yet, Phulbari sub-district has taken measures in line with the Government of Bangladesh's national guidelines to prevent the outbreak. This has naturally created an economic crisis that disproportionately impacts the poor.

The analysis in this paper is based on a series of 24 interviews conducted with people living in Phulbari during May 2020. We interviewed a wide range of people to build a picture of how the community in Phulbari was coping with the twin crises.<sup>2</sup> These interviews paint a chaotic picture of life as it was being lived in during the time of Covid-19. We organise and present this reality in a set of tractable aggregate themes.

## 2 Awareness

Everyone we interviewed was aware that *coronavirus* is an extremely infectious virus and could be transmitted from human to human through proximate contact. When asked where they had obtained information about the coronavirus, without exception, they all said they had obtained the information through either the television or through social media. Very few people mentioned newspapers as their source of information. When asked about what they could do to prevent getting infected from coronavirus, they all stressed the importance of social distancing and washing their hands and the importance of wearing a mask. A large proportion of the interviewees were aware that it was important to wash your hands for at least 20 seconds. It indicates that the Government's public health campaign has been effective in communicating and educating people in Bangladesh about how to prevent an outbreak of Covid-19.

---

<sup>1</sup>Bangladesh Bureau of Statistics (2013)

<sup>2</sup>The individuals we interviewed included the Mayor of Phulbari municipality, a journalist, teachers, doctors, a nurse, local businessmen, local politicians, NGO workers, Imams of the local mosque, union leaders and a fish seller.

A large number of people expressed a concern that while they would like to follow the social distancing guidelines, it was difficult to do so while others were not doing so. This was particularly a concern in crowded places like the local market. At its very essence, social distancing is a problem of strategic interaction where everyone is better off if everyone follows an established social distancing rule. Yet, social distancing can easily unravel leading to a chaotic outcome where everyone is worse off. The outcomes can thus be Pareto-ranked.<sup>3</sup>

### 3 Coordination Problem in Social Distancing

In a social interaction, the impact of an individual's social distancing action is complementary to the actions of the other individuals. That is, social distancing only has an impact if others are doing it too. The social distancing problem can thus be analysed as a symmetric-action simultaneous-move-game where there is an inherent complementarity between the action of individuals. It is a *coordination game* with multiple equilibria that can be Pareto-ranked (Cooper, 1999). In a pandemic, the cost or the burden social distancing imposes on each individual may determine which one of the equilibria ends up becoming the focal point. Our interviews helped us examine the factors that determine the cost the social distancing imposes on individuals in Phulbari.

Van Huyck et al. (1990) and Van Huyck et al. (2007) have shown in laboratory experiments that small groups can coordinate on Pareto superior equilibrium and the ability to coordinate on Pareto superior equilibrium disappears as the group size increases. Intuitively, this suggests that groups can converge to a new governing social norm if the size of the group is small and the membership of the group is stable. Yet, it is difficult to do so in large groups without stable membership. Hence, the perennial problem of creating order within the chaos of urban sprawl in a developing country.

There are to be echos of the tragedy of the commons<sup>4</sup> in this new social distancing problem (Hardin, 1968), which can be solved by establishing a set of governing norms that ensure social cooperation (Ostrom, 1990). Stability of the membership is key in this phenomenon. Social cooperation often hinges on shared history, values and resources. Provision of commons require social interaction, social networking, shared understanding and social cooperation. In evolutionary biology, Dugatkin (1999) classifies social-cooperation into the following four categories: kin and family selection, direct reciprocity, selfish teamwork and group altruism. Direct reciprocity and selfish teamwork have direct relevance to understanding how social cooperation can be achieved in a coordination game where the players have no pre-existing relationship to start with. It is best described by Ostrom (1990, pp. 183-184) in the following quote.

---

<sup>3</sup>An outcome where everyone makes an effort to social distance is Pareto-superior to the outcome where everyone gives up on social distancing because either it is very costly to carry out or is ineffective because no one else is following it.

<sup>4</sup>Tragedy of the commons occurs when individuals act independently in their own self-interest and pursue actions that are contrary to the collective common good. The tragedy of the commons applies to the class of situations where a well-defined collective common good exists.

“In small-scale CPRs<sup>5</sup> individuals repeatedly communicate and interact with one and another in a localised physical setting ...develop shared norms and patterns of reciprocity.”

Ostrom’s governance system requires a stable group of users, establishing the rules of usages, speed and accuracy in detecting any deviation from the established rules and using graduated sanctions to enforce the established rules. Yet, urban sprawls in developing countries often struggle to establish a set of governing norms on their own. The ephemeral nature of the social interaction in congested urban spaces inhibit the creation of social relationships and thus become an impediment for social cooperation.<sup>6</sup>

### 3.1 Congested Spaces

Our interviewees indicate that the local market in the Phulbari was one such congested urban space and maintaining the social distance required in the local market required considerable effort. While the fear of the unknown helped establish social distancing as the norm in the early stages of the pandemic, over time as the fear of the worst has not materialised, people grew tired of the social distancing and reverted back their old way of interacting. What also worried the interviewees was that the proportion of people wearing masks in public in May 2020 remained low. The price of masks is 15 Taka (0.18 USD) and may explain their limited adoption by the people who simply cannot afford to buy a mask. Masks are uncomfortable to wear in warm weather its use had declined as the weather got warm. Similarly, the cost of soap is 10 Taka (0.12 USD), which may limit how prevalent hand-washing is amongst people of Phulbari.

Apart from the market, people also tend to congregate at places of worship. While people were following the government guidance and praying at home in April, the attendance at the mosque has increased in May. This may possibly be due to Ramadan. We interviewed two imams from the local mosque in Phulbari. While they seemed to be aware of the basic principles of social distancing and hand-washing, they seemed keen to interpret the pandemic from their own perspective. One of the imams correctly pointed out that “prophet (SWT) forbade anyone to go out of any area where a pandemic is taking place” and “the people who are poor have a right over the wealth of the solvent”. While these responses seemed useful and effective in combating the pandemic, other pronouncements seemed odd and troubling. There were responses like “virus is a divine punishment from Allah”, “we have to stay away from adultery” and “we cannot let women out of their covers.” The risk is that if over time there is a possibility that early consensus created by the government through its public health campaign about Covid-19 may start to fragment as over time. There is a long history of vaccine-hesitancy which has resulted from a clash between religious belief and

---

<sup>5</sup>common-pool resources

<sup>6</sup>Parikh et al. (2015) documents how some Indian slums have solved these coordination problems through infrastructure investment.

scientific ideas as documented by papers like campaigns Dubé et al. (2013), Blume (2006), Swales (1992) and Storm (2011). It would be wise for the local administration to keep the Imams on their side, especially in areas like Phulbari where the literacy rate was only 52.4% at the last census in 2011 (Bangladesh Bureau of Statistics, 2013).

### 3.2 Role of Sub-District Coordination Committee

Ministry of Health and Family Welfare (2020) document sets out in detail the Government of Bangladesh's Covid-19 response plan. A key part of the plan is to establish a hierarchical system of coordinating committees at national, divisional, district and sub-district levels to combat the pandemic.<sup>7</sup> The role of the lowest level coordinating committee, the Sub-district Coordination Committee is to increase the awareness about the pandemic, ensure that the infected are quarantined, implement the national guidelines, coordinate with other committees upstream and implement their instructions in the sub-district.

The Phulbari sub-district coordination committee is composed of the Sub-district's Chief Executive Officer (UNO), Health Officer, Police sub-inspector and a local journalist. The inclusion of the journalist is not prescribed in Ministry of Health and Family Welfare (2020) and can be seen as a pro-active measure to by the local administration to include a representative to the civil society in coordination committee.

The Phulbari sub-district coordination committee was often mentioned by the interviewees. They all said that Phulbari sub-district committee had been proactive. Their most visible action so far has been to move the market from its old congested location to an open field. As we discuss below, recent papers have shown that patterns of aerosol dispersal exhaled by infected individuals outdoors dramatically decreases the risk of infection outdoors. It also reduces the effort individuals have to make to maintain social distance while shopping, making it much easier for society to adopt social distancing as its new social norm. Such changes can potentially change the focal point in the coordination game. Our interviewees were positive about the role police and the army had played hitherto in the area. It indicates that the law enforcement arm of the government has not been used to enforce social distancing through coercion. This is an example of how the coordination problem in social distancing can be solved without resorting to the coercion by simply reducing the effort people need to exert in order to follow the rules of social distancing.

All the interviewees did express their concern that while social distancing followed in some places like the market and hospital, people do not follow it in other congested places. The municipality of Phulbari had a density of 2166 individuals per square kilometer at the last census in 2011 (Bangladesh Bureau of Statistics, 2013). Given its high density, ensuring adherence to social distance policy within Phulbari is likely to remain a formidable challenge.

The Mayor Municipality in the interview said that he had taken several steps like using bleach

---

<sup>7</sup>For administrative purposes, Bangladesh is divided into 8 divisions, 64 Districts and 492 Sub-Districts.

to disinfect the street and broadcasting public health messages over the loudspeakers to create awareness about coronavirus amongst the people living in Phulbari. He also said that he had played a proactive role in facilitating the move of the market from its earlier congested location to an open field.

## 4 The economic crisis

All interviewees expressed concerned about the burden of the economic cost that pandemic has imposed on society. The restriction on the work was eased in early May in Bangladesh with the precondition that social distancing is practised at workplaces. A large number of our interviewees said that they were worried about the cramped conditions the workers in the garment factory worked under. Unfortunately, we have no direct evidence of whether social distancing rules are being adhered to or not within garment factories and other places of work in Phulbari.

The Government of Bangladesh announced that it would start selling the coarse variety of rice at a subsidised price of 10 Taka (0.12 USD) per kg through an open market sale.<sup>8</sup> Government's objective was to stave off starvation resulting from the lockdown announced on 26th March 2020. Amid allegation of misappropriation, the open market sale was abandoned and the government switched to a system where only people with the ration card could buy the subsidised rice. Both the Mayor of Phulbari Municipality and the journalist expressed concern about the ration card scheme. They said that the poor and needy had not been able to obtain a ration card in order to avail of the subsidised rice scheme.

While in theory, the ration card allows for effective targeting for a benefit-in-kind scheme, the reality is that it imposes a huge logistical burden on any bureaucratic system, let alone one in a developing country facing the threat of a pandemic. Effective targeting requires fiscal capacity,<sup>9</sup> which is the root cause of lack of development. While it may seem like an insurmountable problem, Besley and Persson (2009) present evidence that crisis presents an opportunity to develop their common-interest public goods.<sup>10</sup>

Besley and Burgess (2001) examine how the government responds to droughts and floods using a panel data spanning 34 years across 16 Indian states. Besley and Burgess (2001) show that an increase in the level of newspaper circulation at the local level is associated with an increase in the government's response to natural shocks like droughts and floods. This highlights the role local media can potentially play in making the government more responsive to local emergencies.

Reinikka and Svensson (2004) document the corruption in the school funding system in Uganda

---

<sup>8</sup>The Financial Express (2020) reported on 23 March 2020 that the coarse variety of rice was retailing at 46 Taka (0.54 USD) per kg.

<sup>9</sup>Fiscal capacity is the ability of the government to tax economic activity and use the revenues to carry out other functions of the state like providing public goods.

<sup>10</sup>Besley and Persson (2009) look at the role war plays in creating common-interest public goods. The mobilisation effort required during a war is not unlike the one required during a pandemic.

in the early 1990s. The local schools received only 13% of the grants allocated to them by the central government. In an effort to reduce this leakage of funds, the Central government started publishing information about school grants in the local newspapers. As a result, the schools started receiving most of the funds allocated to them. Reinikka and Svensson (2004) show how making information public can be a powerful deterrent for local capture of funds. Once the local community and school heads were empowered with information about the funding, they started using this information to extract the funding allocated to them from the local administration.

While modern telecommunication revolution has altered the media landscape, the ideas in Besley and Burgess (2001) and Reinikka and Svensson (2004) remain as relevant today as they ever were. Both papers show that large government machinery creates dark corners within its labyrinth that can then be exploited by government insiders to enrich themselves. Or these dark corners could simply induce inertia in the system. Information empowers people, which they can then use to draw out better governance from the government machinery.

## 5 Concluding Comments

While Phulbari has been able to keep an outbreak of Covid-19 at bay through either luck or intent, it has reduced the economic activity in the area. The poor especially are affected by reduced economic activity. Our interviews indicate that the local administration's capacity is limited and it is stretched beyond capacity. With its limited capacity, the Sub-district Coordinating committee has been effective in carrying out roles that are not resource-intensive. These include creating awareness through a local public health campaign and facilitating measures like moving the location of the market that make social distancing easier to maintain. The involvement of a journalist in the Sub-district coordination committee is a positive sign. It gives the Committee access to valuable information about society at large.

Yet, there is an economic crisis gathering pace while Phulbari waits out Covid-19 pandemic. The economic crisis in the long-run may turn out to be as unforgiving as the pandemic. Counter-acting the economic crisis may require a greater investment of resources than combatting the pandemic.

### 5.1 Policy Proposals

We make three specific proposals that are not resource-intensive and could potentially alleviate the economic crisis without increasing the risk of a Covid-19 outbreak.

**Proposal 1:** *As far as possible move the economic activity outdoors. If it is not possible to do so, ensure that there is adequate ventilation in enclosed workspaces that effectively disperses the aerosol exhaled by workers. This kind of ventilation can be created by simply opening the windows and ensuring that the fans push the air towards the windows.*

Lu et al. (2020) carefully studies the transmission of Covid-19 in a Chinese restaurant in early

February where an infected person passed on the infection to people sitting on three tables in one row but not to the rest of the people in the restaurant. What was striking was that the paper showed infection pattern was consistent with the airflow pattern created by the air-conditioning. Liu et al. (2020) examine the aerosol concentration of Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) RNA concentration within two Wuhan hospitals. They found that the aerosol concentration of SARS-CoV-2 RNA was low in well-ventilated areas like the isolation wards but much higher in low ventilated areas like the patient's toilets and staff areas. In on-going practice-oriented work, Louise Walsh from Cambridge University<sup>11</sup> shows that replacing the standard mixing ventilation in hospitals with partial cross-ventilation reduces the risk of Covid-19 infection between patients in hospitals.

What matters is not just *whether* or not an interaction between the infected and the susceptible occurs, what matters is *where* that interaction occurs. The reproduction rate is higher indoors. Further, the pattern of ventilation and airflow in confined spaces is one of the key determinants of the reproduction rate. Morawska and Cao (2020) is emphatic in arguing that recognising the risk of transmission in confined spaces is key to fighting the Covid-19 epidemic. Given the temperate climate, moving economic activity outdoors may be feasible and allow economic activity in the area to resume.

**Proposal 2:** *Focus on reducing congestion, even if it is by small amounts. Making it even marginally easier for people to follow social distance rules could potentially lead to large impacts by making it easier for people to converge upon a new set of social norms.*

Social distancing itself is a social process and requires people to adhere to the social distancing norms collectively. While congested spaces destroy the individual incentive to follow the social distancing norms, reducing the congestion by even small amounts could potentially sustain the social distancing norms. Local administration's action of relocating the market place to an open field found favour with most of our interviewees. It is exactly the kind of small change that is not resource-intensive for the local administration and can take can kick-start a social process and lead to more significant social change. In a similar vein, subsidising the cost of masks and soaps are actions than can help the fight against the pandemic by moving the society to a point where its use becomes a focal point equilibrium.

**Proposal 3:** *Improve the targeting of the poor through in-kind benefits by empowering the poor through information. This would entail making the information about in-kind beneficiaries public.*

Besley and Burgess (2001) and Reinikka and Svensson (2004) have shown in a different context the power information has in terms of streamlining the role of bureaucracy and realigning the bargaining power between the bureaucratic-political nexus and the deserving beneficiary. The bureaucratic-political nexus often creates a perverse incentive for the insiders and frustrates the best intentions of even the most benign individuals in the system. Making information public shifts

---

<sup>11</sup><https://www.cam.ac.uk/stories/emergency-hospitals>

this balance of power. The Government of Bangladesh has been struggling to target its poor and needy through its scheme to provide subsidised rice. One way to solve the problem would be to make the list of beneficiaries public.

Besley and Persson (2009) have shown in their work that crises offer an opportunity for institutional renewal. There is no reason why Bangladesh and other developing countries should let the opportunities of institutional renewal offered by this crisis go to waste.

## References

- Bangladesh Bureau of Statistics (2013). District Statistics 2011, Dinajpur. Technical report.
- Besley, T. and Burgess, R. (2001). Political agency, government responsiveness and the role of the media. *European Economic Review*, 45(4-6):629–640.
- Besley, T. and Persson, T. (2009). The origins of state capacity: Property rights, taxation, and politics. *American economic review*, 99(4):1218–44.
- Blume, S. (2006). Anti-vaccination movements and their interpretations. *Social science & medicine*, 62(3):628–642.
- Cooper, R. (1999). *Coordination games*. Cambridge University Press.
- Dubé, E., Laberge, C., Guay, M., Bramadat, P., Roy, R., and Bettinger, J. A. (2013). Vaccine hesitancy: an overview. *Human vaccines & immunotherapeutics*, 9(8):1763–1773.
- Dugatkin, L. (1999). Cheating monkeys and citizen bees: The nature of cooperation in humans and animals.
- Hardin, G. (1968). The tragedy of the commons on science magazine edition 162.(13 december) p 1243-1248.
- Liu, Y., Ning, Z., Chen, Y., Guo, M., Liu, Y., Gali, N. K., Sun, L., Duan, Y., Cai, J., Westerdahl, D., et al. (2020). Aerodynamic analysis of sars-cov-2 in two wuhan hospitals. *Nature*, pages 1–6.
- Lu, J., Gu, J., Li, K., Xu, C., Su, W., Lai, Z., Zhou, D., Yu, C., Xu, B., and Yang, Z. (2020). Covid-19 outbreak associated with air conditioning in restaurant, guangzhou, china, 2020. *Emerging Infectious Diseases*, 26(7).
- Ministry of Health and Family Welfare (2020). National preparedness and response plan for covid-19, bangladesh. Link.
- Morawska, L. and Cao, J. (2020). Airborne transmission of sars-cov-2: the world should face the reality. *Environment International*, page 105730.

- Ostrom, E. (1990). *Governing the commons: The evolution of institutions for collective action*. Cambridge university press.
- Parikh, P., Fu, K., Parikh, H., McRobie, A., and George, G. (2015). Infrastructure provision, gender, and poverty in Indian slums. *World Development*, 66:468–486.
- Reinikka, R. and Svensson, J. (2004). Local capture: evidence from a central government transfer program in uganda. *The quarterly journal of economics*, 119(2):679–705.
- Storm, A. E. (2011). Religious conviction and the boston inoculation controversy of 1721.
- Swales, J. (1992). The leicester anti-vaccination movement. *The Lancet*, 340(8826):1019–1021.
- The Financial Express (2020). Rice prices remain high. [Link](#).
- Van Huyck, J. B., Battalio, R. C., and Beil, R. O. (1990). Tacit coordination games, strategic uncertainty, and coordination failure. *The American Economic Review*, 80(1):234–248.
- Van Huyck, J. B., Battalio, R. C., and Rankin, F. W. (2007). Evidence on learning in coordination games. *Experimental Economics*, 10(3):205–220.