



CENTRE for AEROSPACE & SECURITY STUDIES

# **Coronavirus vs. Pakistan: Early Successes in the Epidemiological Battle**

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***Working Paper***

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## Abstract

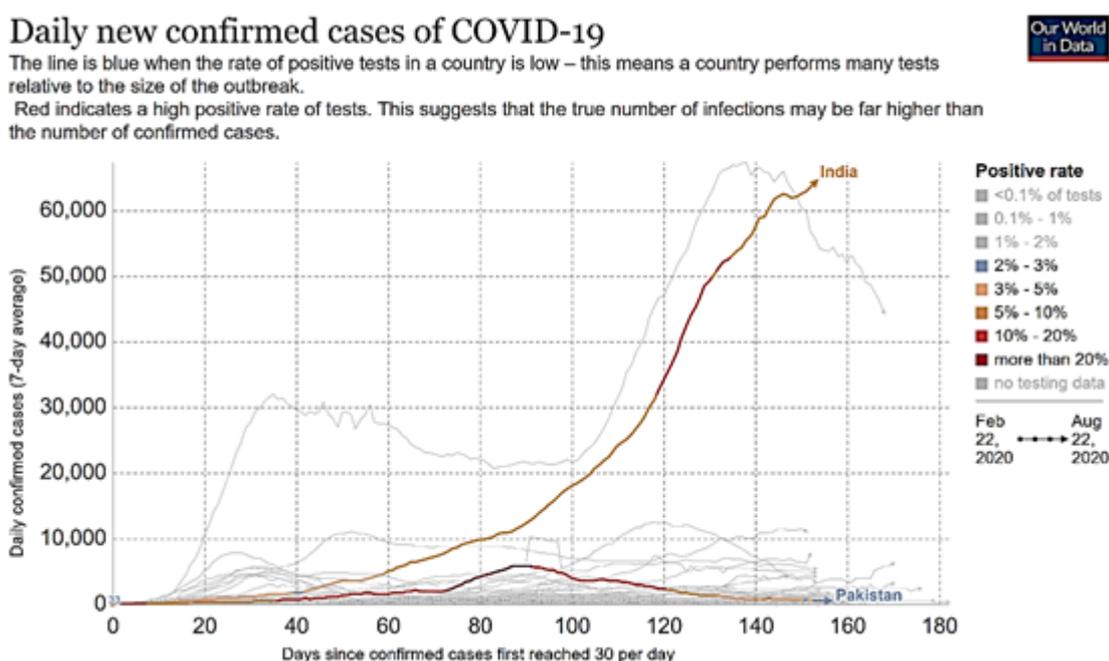
*Why was Covid-19's toll comparatively mild in Pakistan? This Working Paper seeks to tease out possible causal factors for Pakistan's early success against Covid-19. Some elements are structural in nature, while others a function of policy approaches. It should be noted at this juncture as well that the aim of this paper is not to sound a celebratory bugle while the Pandemic persists around the world. Nor is it to suggest that Pakistanis should lower their guard. The Coronavirus Pandemic remains an ongoing concern. That said, it is worth exploring some factors that might help to collectively explain Pakistan's success thus far against the Pandemic. The paper proceeds to highlight some factors worth considering, but they are presented in no particular order as their discrete contribution is still indeterminate. The factors include: a young population, a low obesity rate, a non-specific immunity, urban design, social conservatism, smart lockdown policies, proactive political attitude (low denialism), strong civil society response and curbing rural transmission.*

**Keywords:** Covid-19, Pakistan, Civil Society, Smart Lockdown, Urban Design, Conservatism.

## Introduction

The Coronavirus (Covid-19) Pandemic that rampaged the earth throughout 2020 also brought the epidemiological battle to Pakistan's doorstep, where it was thought that structural weaknesses would exact a particularly severe toll. This was because public health concerns such as dengue and polio already loomed large (Chohan 2020i), the regional security situation was worsening (Chohan 2019c) and the economy was already facing acute distress (Chohan 2020c,g,l,j). In fact, an algorithm designed at Imperial College London in early 2020 predicted that, in a worst case scenario, Pakistan would suffer 79,000 deaths by August 10, 2020, and if left entirely unchecked, by January 26, 2021 the death toll would reach an astounding 2.3 million (Mangwat 2020). This was the horrifying backdrop in which it was thought that the country's weak economy, structural inequalities, and regional security worries would possibly create an internal catastrophe through death tolls unheard of since independence in 1947.

**Figure 1: India and Pakistan against the Pandemic (Cases)**



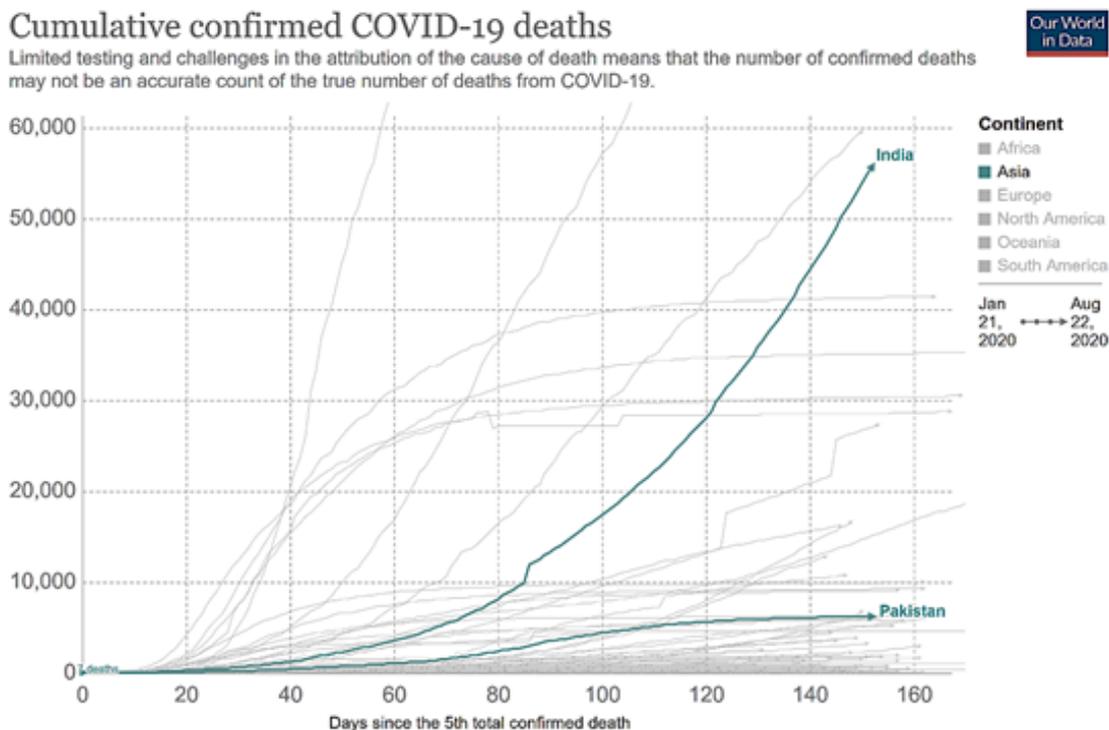
**Source:** European CDC – Situation Update Worldwide – Last updated 22 August, 13:04 (London time), Official data collated by Our World in Data.

**Note:** Only countries for which testing data is available are included. Details about this data can be found at [OurWorldInData.org/coronavirus-testing](https://OurWorldInData.org/coronavirus-testing). [OurWorldInData.org/coronavirus](https://OurWorldInData.org/coronavirus).

A similar fear struck the rest of the world as well. In the United States, much earlier work had warned that the country was ill-prepared for an infectious disease pandemic (Anthony et al., 2017). For developing countries, the fear of viral outbreaks was already frightening and widespread (Anand and Barnighausen 2007), not least

because economic inequality and unequal access to healthcare would exacerbate other structural conditions (Barata et al., 2012). Although initiatives such as GAVI and CEPI had tried to mobilize resources against infectious diseases (Arsenault et al., 2017a-b), it was always generally believed that still more resources would be required (Brende et al., 2017, Arsenault et al., 2017c). Contagious respiratory illnesses such as influenza already posed a worldwide health risk, even the before Coronavirus outbreak occurred (Baker et al., 2009). This included a fear that those most at risk would not be given the proper protective coverage (Barbaro and Brotherton 2014).

**Figure 2: India and Pakistan against the Pandemic (Deaths)**

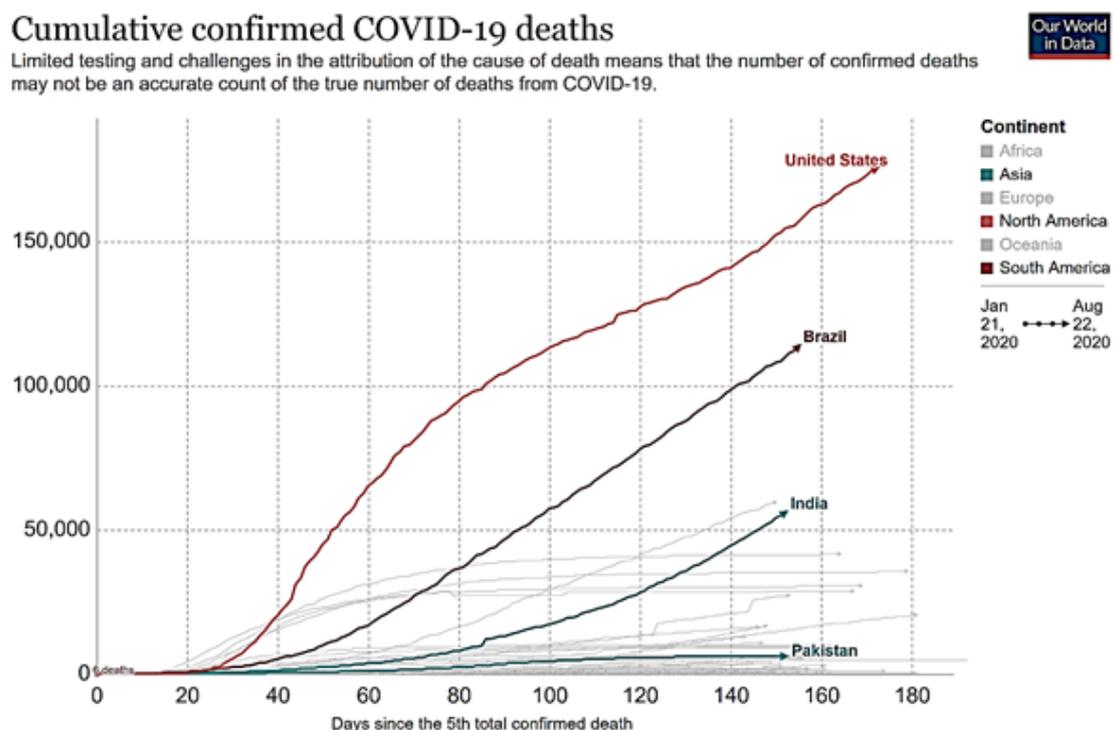


**Source:** European CDC Situation Update Worldwide. Last updated 22 August, 13:04 (London time), Our World In Data.

At the same time as the public health toll was forecast to be devastating, an equal economic shock was also anticipated (Barro et al., 2020; 2020f,i,j). This economic devastation would be particularly brutal in Pakistan, it was thought, since the economy was in the doldrums pre-Coronavirus. Yet the economic pessimism was global in nature, exacerbated by the fact that propaganda and blame-game tactics also overshadowed international cooperation efforts (Budhwani and Sun 2020; Chohan 2019a), selfish mercantilism prevailed as an overarching philosophy, and the two largest economic powers (the US and China) appeared to engage in a tense prelude to a New Cold War. Meanwhile, despite intense efforts to develop a workable vaccine

(Callaway 2020), as of mid-August 2020<sup>1</sup> the clinical trial phase was still the preponderant stage for most efforts (Chen 2020). At the same time, although issues such as Universal Basic Income and a Green New Deal (see Cohan 2019d-e) were raised in hushed tones, little headway was made in many countries (including the US) where their need was most acutely felt. This was the gloomy background in which countries such as Pakistan might well have been written off as basket cases where the pestilence of Covid-19 would wreak full havoc.

**Figure 3: Cumulative Confirmed Deaths in Four Large Countries**



**Source:** European CDC Situation Update Worldwide. Last updated 22 August, 13:04 (London time), Our World In Data.

However, six months after the first recorded case, Pakistan's Covid-19 toll stood far below what had been feared early on. A far cry from the doomsday algorithm of the Imperial College, Pakistan had recorded only 6,200 deaths by August 10<sup>th</sup>, which was 92% less than what had been foretold in the case of reckless governmental and societal abandon. Pakistan's success was particularly striking when compared with the US, India, and Brazil. The US's case was instructive because Americans had long thought of Pakistan as a third world circus, when it was in fact the United States that appeared far more like a tin-pot banana republic. By mid-August the US had racked

<sup>1</sup> The horizon of analysis in this paper is confined to August 2020, to set it as the "early" phase of the Coronavirus Pandemic.

up 176,000 deaths on 5.6 million cases, and it was Pakistan that had sent protective equipment (PPE) to assist the turbulent and unstable democracy known as the United States (see Latif 2020). India’s case was instructive because it had comparable socioeconomic indicators, albeit scaled sevenfold (both in poverty and wealth). However, India’s with nearly 3 million cases and almost 60,000 deaths, the carnage in India was in fact tenfold, and ranked among the 3 worst-affected countries, with little sign of flattening the curve – unlike Pakistan, where the curve had already begun to flatten after 90 days . Brazil was perhaps most indicative in that it had a comparable population and also suffered from structural economic issues (income inequality, middle-income trap). Yet they had 3.6 million cases and 114,000 deaths, a figure beyond the pale when compared to Pakistan.

**Table 1: Select Country Coronavirus Cases and Deaths**

Large Country	Cases	Deaths
US	5,600,000	176,000
Brazil	3,600,000	114,000
India	3,000,000	60,000
Pakistan	292,000	6,200

**Source:** Our World in Data. As of mid-August 2020, approximate figures.

But the big question that persists then is *why* was the Pandemic’s toll comparatively mild in Pakistan? Most Pakistanis are inclined to remark that it was all by the mercy of Allah. Be that as it may, this Working Paper seeks to tease out possible causal factors for Pakistan’s early success against Covid-19. Some elements are structural in nature, while others a function of policy approaches. It should be noted at this juncture as well that the aim of this paper is not to sound a celebratory bugle while the pandemic persists around the world. Nor is it to suggest that Pakistanis should lower their guard. The Coronavirus Pandemic remains an ongoing concern. That said, it is worth exploring some factors that might help to collectively explain Pakistan’s success thus far against the Pandemic. The remainder of this paper proceeds to highlight some factors worth considering, but they are presented in no particular order as their discrete contribution is still indeterminate.

## Analysis

Some of the factors due to which the Pandemic's toll was comparatively mild in Pakistan are discussed in relative detail below:

1. Young Population,
2. Low Obesity Rate,
3. Non-Specific Immunity,
4. Urban Design,
5. Social/Cultural Conservatism,
6. Smart Lockdown Policies,
7. Political Will,
8. Strong Civil Society Response, and,
9. Curbing Rural Transmission.

### 1. Young Population

It was detected early on that Coronavirus has a disproportionate impact on the elderly and is comparatively lenient with the young (see Liu et al., 2020). As Lian et al., observed, the Coronavirus death toll was disproportionately to be found in older cohorts, even when young people might possess a higher viral load (2020). Having a larger elderly demographic segment would thus exact a larger death toll from Coronavirus in any country. In Pakistan, as the UNDP notes, 70% of the population is below the age of 29 (Artaza 2020). Having such a youth bulge may be both a blessing and a curse, for a swathe of unemployed young men soon coming of age might equally presage a wave of violence as much as a well-educated and employed youth bulge might augur for an economic renaissance. From a Covid-19 perspective, having so many young people in the population would mean that its devastation would be quite limited. Hence, a structural-demographic factor strongly favored Pakistan.

### 2. Low Obesity Rates

Covid-19's death toll accentuates on the comorbidity of other factors including obesity (Simmonet et al., 2020), and so having an obesity epidemic à la United States would immediately create a larger risk of Covid-19 deaths (Kalligeros et al., 2020). Although

Pakistan's obesity rate has increased among millennials and Gen Z in comparison to older generations, due to poorer diet and an increasingly sedentary lifestyle, its prevalence is still low by global standards, where it ranks 148/191 countries with a rate of 8.6% (WHO 2020). China, where the initial Covid-19 outbreak took place, has an even lower obesity rate of 6.2%. What is perhaps even more surprising is that India has an extremely low obesity rate of 3.9% (ranked 187/191) and is still such a disaster in terms of Coronavirus cases and deaths. Brazil's obesity rate of 22.1% helps in part to explain its difference with Pakistan, while the outlandish obesity rate of the United States, at 36.2% is an evident comorbidity factor in its atrocious Covid-19 response. Pakistan's low obesity rate, nevertheless, may have been a contributing factor to a low Covid-19 death rate.

### **3. Non-Specific Immunity**

At the time that cases were rising around the world in mid-2020, it was observed that Pakistanis seemed to display a "non-specific immunity" to Coronavirus which may have been the product of widespread vaccination against some other disease (Safdar 2020). As a paper by Iqbal (2014) highlights, BCG provides a non-specific immunity against several maladies that afflict the developing world, including tuberculosis and leprosy. In Pakistan, there has been more than 90% population coverage of the BCG vaccination through the EPI program that was initiated in 1965. Although the precise relationship of BCG vaccination to Covid-19 through a non-specific immunity requires more rigorous testing, it remains a notable hypothesis that BCG might have assisted Pakistan with low fatality rates (Safdar 2020).

### **4. Urban Design**

With the exception of a few urban centres such as Islamabad, as well as special zones in major cities such as Bahrias and DHAs, much of the urban development in Pakistan has occurred in a generally ad-hoc and unplanned manner. This has had far reaching health and environmental effects, largely to the public's detriment. As part of that sprawl, however, most urban "design" has been low-rise and compact. This has also had severe environmental consequences such as the dropping of the water table in a water scarce country (Mehmood 2020). However, one advantage of largely low-rise residential living spaces has been in the reduction of Coronavirus' transmission rates as compared to areas with high-rise urbanization, and examples of this were witnessed around the world from Calgary (Pike 2020) to Mumbai (Bose 2020). Intuitively, this is attributable to the confined spaces of common movement in high-rise

buildings, particularly elevators and stairwells, which pose a higher risk to a larger number of people. Pakistan's largely low-rise urban design may have contributed positively to slowing down the spread.

## 5. Social/ Cultural Conservatism

Cultural conservatism is strongly marked among many of Pakistan's citizens,<sup>2</sup> although such a general statement should be matched with the recognition of the country's cultural kaleidoscope (Abou Zahab 2020). Without resorting to value judgements about the merits of conservative societies, there is an epidemiological aspect to the mobility of conservative norms that warrants attention. In such societies, it is generally uncommon for women to hustle about in the public sphere. Their presence is most apparent in the private sphere, marked by traditional gender roles (Abou Zahab 2020). Because of this, they are much less likely to come into contact with a Coronavirus carrier during some form of movement or transit, and as scientists have observed, there is a disproportionate exposure of men to the Coronavirus across the world than of women (Waris et al., 2020). With half the population being women in any significantly large sample, the fact that half the population is kept in a relative state of private sphere is itself a de facto semi-quarantine. This paper does not express a value judgement about such social norms but highlights the reduced probability of Coronavirus transmission as a possible consequence.

## 6. Smart Lockdown Policies

The Government of Pakistan was proactive in initiating a program of "smart lockdowns"<sup>3</sup> which refers to a series of targeted sectoral closures for specific periods of time (Farooq et al., 2020). The advantage of such an approach was that it did not paralyze entire cities, but rather reduced the mobility of residents in specific areas where the risk of transmission might have been higher. Epidemiological modelling (see Vega 2020) suggested that such a smart-lockdown approach might yield better trade-offs between "lives and livelihoods" (see Chohan 2020c-d). As an example, specific sectors of the capital Islamabad were tentatively sealed off including G-6, G-7, and the I-Sectors.

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<sup>2</sup> See discussion in a MoveHub compilation of three conservatism indices: <https://worldpopulationreview.com/country-rankings/most-conservative-countries>.

<sup>3</sup> Urdu: *makhsoos bandishein*.

## 7. Political Will

One factor that has been largely dependent on the attitude of the administration was its political will to combat the Coronavirus, shunning conspiracy theories and adopting protective behavior (Allington et al., 2020). This can be seen in the dismal failures of the three worst-affected countries: Trump's America, Bolsonaro's Brazil, and Modi's India. In all three countries, fake news has not just proliferated but bolstered the electoral rhetoric of ruling parties, which is a source of *public value destruction* (see Chohan 2019b, 2020e). The political will to undertake protective measures in these three countries was low, and their publics had to pay a terrible price in 2020 from the devastation that Coronavirus wrought. In Pakistan, by contrast, although conspiracy theories regarding Coronavirus abounded, and the public was an unruly disposition in not always taking government instructions seriously (Minhas et al., 2020), the administration itself was not at the mercy of denialism. This is a credit to the Pakistani government for taking the Pandemic seriously and with due regard for the destructive epidemiological potential of careless actions. The Prime Minister had forged a task force with public health experts, and created a coordination mechanism that included all provinces as well as the center, and drew upon civilian and military resources to attempt as proactive a response as possible given the meagre resources available (Anser et al., 2020). Continued political sobriety in the face of the challenge helped with the Coronavirus response as well (Raza 2020).

## 8. Strong Civil Society Response

Where the state may fall short, the people must come to one another's assistance, and in Pakistan, it is often observed that charitable organizations and civil society groups exhibit a proactiveness in assisting the poor and the needy (Malik and Rana 2020). The early Coronavirus lockdowns put immense pressure on the public sector to muster a response, but civil society organizations mobilized quickly to assist the poor with meals other resources to help them weather the storm (Malik et al., 2020). This meant that, even in a country where public finances were inadequate in terms of scope and coverage, people could come to one another's aid and combat the economic threat posed by Covid-19. By highlighting this factor, the paper does not suggest that civil society organizations were weak in other countries. On the contrary, one could observe a worldwide effort at the micro-scale for assistance to the poor through non-state channels. However, highlighting this in Pakistan's case is important because the burden borne by civil society groups was proportionately larger due to the comparatively larger public sector resource constraints.

## 9. Curbing Rural Transmission

One major fear that persisted at the onset of Coronavirus in Pakistan was that, should the virus spread to the rural areas with backward healthcare facilities and substandard access and equipment, the devastation would have been far greater (Anser et al., 2020; Farooq et al., 2020). It was heartening to see, then, that transmission to rural areas remained largely curbed, and the Coronavirus Pandemic was a largely urban phenomenon in Pakistan (Malik et al., 2020). A full two-thirds of Pakistan's population lives in rural areas, which goes as high as 83% in KP and as low as 51% in Sindh<sup>4</sup> (Pakistan Bureau of Statistics 2019). As WHO indicators point out, there are various sorts of deficiencies of healthcare provision in rural areas that would have exponentially worsened the damage of Coronavirus in Pakistan. Barriers to movement and targeted lockdowns, as mentioned above, helped to confine the virus largely to the urban areas of the country, thus alleviating a much greater worry.

### Conclusion: What is to be Learnt?

The initial prognosis of Pakistan's healthcare and economic conditions was exceedingly dire. It was thought that, given the constrained resources of the government and an unruly public to match, attempting serious lockdowns and protective measures in such a large developing country might be a fool's errand. Yet the early phase of the battle against Coronavirus seemed to lean much more in Pakistan's favor when comparisons were drawn with other large countries. The people of Pakistan would attribute this success to the Lord's mercy. Rightly so, but it was worth enumerating several factors that culminated in such an outcome. Some were structural in nature, such as the youth bulge and low obesity rates. Others were shaped by norms, such as low-rise urban development and cultural conservatism. Yet the public managers of Pakistan were also not sitting idly by, and proactive measures such as smart lockdowns, as well as national level coordination, did play an important part as well. Certainly, the denialism that characterized countries such as Brazil and the US was not a mainstay of the government. Civil society too played a heightened charitable role in alleviating the economic distress of the poor.

The culmination of these factors meant that, at least for the early phase, the tussle between Coronavirus and Pakistan leaned towards the underdog – the country itself. However, it is by any stretch of the imagination too early to declare a victory in this

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<sup>4</sup> Islamabad's (Federal Territory) rural population is in fact the lowest at 30%, while FATA's is the highest at 97%, but these are comparatively small demographic regions.

fight. Coronavirus seems to be returning in new waves, and even in countries that considered the war over, new cases are appearing with frightening ferocity. For the big losers in the early phase of the war: US, Brazil, and India, there may be instructive lessons from the Pakistani context that may warrant attention. Yet this battle is, as of this writing, an ongoing one, and continued vigilance is required for a longer-term assurance of reprieve.

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