COVID-19: Urban Vulnerability and the Need for Transformations

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Abstract
The urban–rural divide in India has been the cause of labour flow to Indian cities, which have historically witnessed an insufficiency in planning. Moreover, widening social inequalities exacerbate the living conditions in Indian cities, pushing the migrant labourers from rural areas to the margins of urban spaces. Public policymakers have long turned a blind-eye to migrants, denying them essential social security. This study attempts to review how these factors have made urban space unwelcome to migrants from rural areas, edging them to a state of inability to sustain themselves, especially amidst the COVID-19 pandemic. It is also an attempt to re-evaluate the status of urbanization. The government imposed a sudden lockdown in 2020 to mitigate the effects of the COVID-19 outbreak, leading to a massive exodus of migrants from cities back to their homes. The study also seeks to account for the significance of economic planning and social security with regard to migrant labour.

Keywords
COVID-19, urbanization, internal migration, cities, urban policy, India

Introduction
Urbanization has witnessed rapid growth across the world in the past two centuries. A mere 7% of the world’s population inhabited urban areas in 1,800 according to the United Nations Population Division (UN, 2018). Today, a majority of the human race resides in urban settings. With urbanization set to further expand in the future with rising income levels and migration from agriculture-dependent rural areas, the problems it pose are numerous, ranging from overcrowding to structural poverty and issues of sustainable growth. The arrival of the SARS-COVID-19 pandemic coincided with the tipping point of the carrying capacity of several global urban agglomerations. Bottlenecks caused by a higher demand in urban services due to inadequate social infrastructure made several cities a breeding ground for the initial waves of the viral outbreak (Rajan, 2020a). However, the problem of rapid urbanization does not lie in a vacuum. The capital-intensive growth that followed liberalization of the economy led to what is termed as jobless growth, leaving a majority of the population in the under-performing agricultural sector. This further led to casualization of labour, coercing this unskilled section to take up low-wage and insecure

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jobs. A majority of the migrants who came to cities in search of a better life were from the rural hinterland (Agarwal, 2016). The composite and symbiotic relationship between agrarian distress and rapid urbanization thus becomes important in contextualizing and understanding the patterns of population mobility and epidemiological trajectory of the ongoing pandemic.

Internal migration is an important and pervasive feature of the Indian economy and society. The rural to urban migrants’ share in the population increased from 5.06% in 2001 to 6.5% by 2011. India’s urbanization level is rapidly growing. It increased from 27.81% in 2001 to 31.16% in 2011 based on the 2011 census. About 450 million of 1.2 billion Indians migrated within the country, of which 78 million or 15.6% of all domestic migrants moved from rural to urban areas causing considerable demographic transformation with a ramification of considerable demographic dividend. Between Census 2001 and Census 2011, the number of census towns increased rapidly from 1,362 to 3,894. Additionally, it is noteworthy that out of the 468 urban agglomerations (UAs) or towns, 53 UAs are the major urban centres of the country, with more than a million population, and host about 42.6% of the country’s urban population, pointing to the high concentration of population in comparatively fewer cities. While the influx of migrants into the megacities such as Delhi, Mumbai and Kolkata have slowed down considerably between 2001 and 2011, UAs or Class I towns have witnessed a higher migration growth rate in the same period (see Table 1 for details). Conceptually, this engagement is understood in relation to questions of development, with growing academic and public policy attention being paid to the migration development nexus within which mobility emerges as a potential voyage towards development (Nyberg-Sorensen et al., 2002; Skeldon, 2008).

### Table 1. Population Growth in Major Indian Urban Agglomeration, 2001–2011

| Cities      | Population (2001) | Population (2011) | Growth Rate (%) |
|-------------|-------------------|-------------------|-----------------|
| Mumbai      | 11,978,450        | 12,442,373        | 3.7             |
| Thane       | 8,131,849         | 11,060,148        | 26.5            |
| Pune        | 7,232,555         | 9,429,408         | 23.3            |
| Chennai     | 4,343,645         | 4,646,732         | 6.5             |
| Ahmedabad   | 5,816,519         | 7,214,225         | 19.4            |
| Indore      | 2,465,827         | 3,276,697         | 24.8            |
| Kolkata     | 4,572,876         | 4,496,694         | −1.7            |
| Lucknow     | 3,647,834         | 4,589,838         | 20.5            |
| Patna       | 4,718,592         | 5,838,465         | 19.3            |
| Bengaluru   | 6,537,124         | 9,621,551         | 32.1            |
| Delhi       | 13,850,507        | 16,787,941        | 17.5            |

**Source:** Compiled by the authors from Census of India, 2001 and 2011.

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### Historical Background of Urban Planning

Modern urban planning in India began as a colonial enterprise in its attempt to preserve the good health of British troops who were susceptible to various deadly diseases owing to the sub-continental climate. The creation of cantonments with the purpose of designing healthful environments for the British troops, followed by the civil lines to house the colonial administrators, was further followed by the accommodation of the Indian elite in well-planned spaces. This was a direct translation of the colonial government’s focus on preserving the health of its administrators and its troops that would in turn preserve the Empire’s stronghold of the colony. Subsequently, the habitat that was created for the colonial troops and
officers adhered to the standards of hygiene in the eyes of the colonial administrators and therefore the buildings that were constructed incorporated all-round ventilation, and a certain amount of distancing between spaces, facilities that prevented the rapid spread of invasive microbial organisms. Colonial urban planning, by its own design, excluded informal settlers who fall out of government control and regulations in urban areas. It must be noted here that, in fact, colonial design displaced sections of the urban population, eventually creating what can be called the ‘other’ city that represented a degeneration of materials and hygiene in comparison to the elite neighbourhoods. Such informal squalor settlements, in addition to being associated with the absence of adequate civic amenities, were further exacerbated by the stigma of caste untouchability, which reinforces such socio-spatial segregation.

Smith (2005) refers to the process of reinvestment in the centre of a city as causing a wide lacuna between the periphery and the centre as gentrification of the city takes place, he calls such cities ‘The Revanchist City’. ‘The “revanchist city” expresses a race/class/religious/gender hostility felt by certain sections of the citizens against their neighbours’ (Banerjee, 2012). Banerjee further argues that the revanchist city in India is part of a wider national scene that is characterized by marginalization and exclusion of the socio-religious minorities, especially religious minorities, Dalits, Adivasis and women. He further argues that globalization in the case of Indian cities, contrary to enriching multiculturalism and cosmopolitanism, has in fact aggravated the indigenous-migrant friction leading to the ‘othering’ of the migrants as ‘outsiders’.

James Scott in Seeing Like a State (Scott, 1998) observes that state intervention with high-modernist planning as reflected in the case of Le Corbusier’s Chandigarh and Brasilia, with an attempt to design a scientifically planned urban machine has led to hierarchical segregation. While human needs were scientifically stipulated with excessive concern for efficiency, the lack of it because of socio-cultural diversity and particular histories, along with moral and aesthetic objections to crowded slums is argued to have led to this segregation. Such segregation, in turn, resulted in the upshot of ‘another unplanned city at the periphery and the margins, one that contradicted the austere order at the centre’ (Scott, 1998, p. 132). While Brasilia was planned to be a classless administrative city, the unplanned city was ‘marked by a stark spatial segregation according to social class’ (Scott, 1998, p. 130). Although Brasilia and Chandigarh are highly planned cities, these two cases illustrate the latent unintended consequences of state policy driven by a utopian top-down approach based on the principles of high-modernism. This approach aimed at ‘dramatising the values the new elite wished to convey’ as a precursor to further marginalization of the labour class in both the cities (Scott, 1998, p. 131). In addition, they also illustrate the socio-economic segregation that is particularly important in the context of gentrification and the consequent spatial segregation based on social classes in the urban setting. Such informal urban sprawls need to be understood in the context of the symbiotic relationship between the planned and unplanned sides of the city. Further, it must also be kept in mind that the concept of ‘gentrification’ does not contain the whole idea of ‘urban revolution’ that is witnessed in Indian cities wherein former informal settlements are brought into formal property markets using the financial instruments of real estate. While gentrification refers to reinvestment of capital into the main centres of the city and is derived out of a specific Euro-American experience, the demolition of slums and squalor settlements as part of institution-building exercises must be located in the trajectory of India’s political economy (Ghertner, 2014, p. 132). Development projects have often focused on the surface-level visual redesigning of the city so as to reflect the developing economy while disguising the stark economic inequality and increasing urban poverty.

Drawing parallels from the past, the nineteenth-century cholera pandemic which victimized the bulk of the subordinate classes in particular provides a convenient point of entry to understand contemporary material conditions and ‘affords a unique opportunity to penetrate the class structure and also to uncover the social attitudes and living conditions of a broad section of the population’ (Arnold, 1986, p. 118).
Considering the pandemic, which claimed 23 million lives between 1876 and 1947, is of particular significance here because of its high virulence against the poor and undernourished, especially among the city’s slum-dwellers ‘living in crowded hutments, amid stagnant pools of water and without even elementary sanitation’. Cholera remained an affliction of the poor while the ‘higher class of the native and the Europeans … suffered proportionately less than the lower ranks’ (Arnold, 1986, p. 124). Although the nature of the disease and mode of transmission are distinctly different in the cases of cholera and COVID-19, the material reality, including poor hygienic conditions seems to be a cross-cutting catalyst in the spread of COVID-19 and nineteenth-century cholera epidemic. The COVID-19 pandemic, as in the case of the cholera epidemic can be argued to be impacted by the social inequalities disproportionately affecting the lower classes. A greater awareness of sanitation and hygiene and a higher standard of living among the upper classes prevented them from the worst effects. When marginalized groups are geographically concentrated, segregation enables discrimination in public goods provision, further perpetuating spatial disparities (Trounstine, 2016).

Urbanization and Migrant Labour

Urbanization is a growing phenomenon in South Asia. In India, it is termed as a messy and hidden process with the urban governance institutions finding themselves unable to cope with the steady influx of rural populations to urban regions for work (Ellis & Roberts, 2015, p. 2). The advent of globalization has facilitated an undercurrent, causing rural to urban migration, even in subliminal ways through mass media. Further, the mass media has acted as a major pull factor in the unabated movement of aspiring millennials from rural to urban areas in search of educational and employment opportunities with the promise of a ‘better’ livelihood. This phenomenon has been referred to as ‘social’ or ‘functional’ urbanization (Smailes, 1975). While economic opportunities obviously constitute the key reason for migration among labour migrants, field studies tend to reveal a variety of motivations for migration, which are shaped by conditions at both the origin and destination of migration, and by the patterns of recruitment and migration networks (De Haan, 1994). Structural issues like caste, agrarian crisis and poverty have created the urgency to migrate.

Annually, a net outflow of two million occurs from the rural to urban areas, although it contributes to only one-fifth of the urban population growth (Bhagat, 2012). Some researchers think this cannot be attributed to low mobility in India (Lucas, 2020). Bhagat (2017) notes that the increased urban population growth rate is attributed more to a natural increase in urban population as well as the product of reclassification of many rural areas as urban areas, often known as ‘in-situ’ urbanization. However, the indispensability of migrant labour in the urban economy cannot be ruled out as migrant labourers are essential for the basic functioning of these cities. They form the essential labour input in a number of formal and mostly informal sector organizations in these cities, as in the manufacturing and construction sectors to those including brick-kilns and textiles (Deshingkar & Akter, 2009; Srivastava & Sutradhar, 2016).

There has been an inadequate understanding of the mode of urbanization and changes in urban morphology that have taken place, especially concerning the middle class and urban poor. As of 2011, the population living in urban areas was about 31% or about 377 million.

While the percentage of people residing in urban areas has increased steadily over the last few decades, it still falls below the global average of 55%. As is evident in Table 2, the urbanization pattern in India has been skewed towards only a few cities, with just over 42% of the total urban population and over 13% of the total population in India residing in 53 cities, which have a population of more than one million. An urban population (United Nations, Department of Economic and Social Affairs P.D., 2019)
pushes the demand for goods and resources in cities and need for good infrastructure. According to the 
census data, 900 million people live in two rooms or less and 65% of urban households with more than 
three individuals live in less than two rooms. Accelerated migration into urban areas, with the increased 
demand for civic amenities, puts the urban infrastructure under heavy stress leading to perilous impacts 
on urban areas. This subsequently leads to increased urban poverty. It is well documented that Indian 
cities continue to fail to provide the adequate needs of rural migrants and urban poor (Bhowmick, 2020). 
The 61st round of the National Sample Survey Organisation (NSSO) data indicates an increase in number 
of the poor living in urban areas by 44 lakhs (4,400,000) between 1994–1995 and 2005–2006, while a 
decrease in rural poverty was witnessed in the same period. A high level of urbanization and rampant 
civic anarchy in Indian cities are two sides of the same coin. The proliferation of slums, housing deficits, 
poor investment in public transport, along with elite paradigmatic imagination which defines the life of 
the majority have furthered the state of wide-scale poverty and hunger.

### Unsustainable Urbanization and its Impact

Uncontrolled rural–urban migration leading to rapid and unsustainable urbanization has had far-reaching 
socio-economic impacts on urban sprawls around the globe. Large UAs which have been drivers of eco-
nomic growth in the developing world—although having contributed to increasing the national income—
have not coincided with improvement in the quality of life of all citizens. Failure of a robust social 
welfare policy has resulted in increasing inequalities, making urban life unsustainable for the majority. 
Unsustainable urbanization is ‘driven not by economic opportunity but by high birth rates and a mass 
influx of rural people seeking to escape hunger, poverty and insecurity’, according to the Food and 
Agriculture Organization (Sylvia, 2016). Public health problems, higher vulnerability to disasters, poor 
infrastructure, proliferation of slums and social instability are some of the notable risks that follow 
unsustainable urbanization (Burgess & Jenks, 2002). ‘The World Cities in 2018’ report published by the 
UN projects that by 2030, 60% of the global population would be housed in urban areas. In line with this, 
the UN Sustainable Development Goals recognizes that making ‘inclusive, resilient and safe’ cities 
involve creating safe and affordable housing and building resilient societies and economies.

The current state of urban planning in India that is largely reactive, resulting in urban sprawls and 
low-density suburbanization is argued to have a heavy toll on the environment as it increases the cost of 
providing infrastructure to a dispersed population (Knight Frank, 2020). Further, the ‘Safe Cities Index 
2019’ report published by The Economist Intelligence Unit (2019), in an evaluation of 60 major cities in

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**Table 2. Urbanization Trends in Million Plus Cities in India (1951–2011)**

| Year | Urban Population (in Millions) | Percentage Urban | Decennial Growth (%) | No. of Million Plus Cities | Population in Million Plus Cities (in Millions) | Percentage of Population in Million Plus Cities to Total Urban Population |
|------|-------------------------------|------------------|----------------------|---------------------------|-----------------------------------------------|------------------------------------------------------------------|
| 1951 | 62.44                         | 17.29            | 41.12                | 5                         | 11.75                                         | 18.81                                                            |
| 1961 | 78.94                         | 17.97            | 26.41                | 7                         | 18.10                                         | 22.93                                                            |
| 1971 | 109.11                        | 19.91            | 38.23                | 9                         | 27.82                                         | 25.52                                                            |
| 1981 | 159.46                        | 23.34            | 46.14                | 12                        | 42.12                                         | 26.41                                                            |
| 1991 | 217.18                        | 25.72            | 36.19                | 23                        | 70.16                                         | 32.54                                                            |
| 2001 | 286.12                        | 27.86            | 31.74                | 35                        | 107.88                                        | 37.81                                                            |
| 2011 | 377.10                        | 31.12            | 31.81                | 53                        | 160.71                                        | 42.62                                                            |

*Source: Compiled by the authors from Censuses of India, 1951–2011.*
the world with ranks based on four indicators (digital security, health security, personal security and infrastructure security) ranks Mumbai and Delhi at 45th and 52nd positions respectively, indicating unsatisfactory performance. It must also be noted that 37 cities from India feature in the top 100 world cities with the worst PM10 (particular matter) pollution. Delhi, Raipur, Gwalior and Lucknow are listed among the top 10 polluted cities (World Health Organization, 2014; World Bank (n.d)). Urbanization, though promising increased economic growth has led to a spike in toxic pollutants in the atmosphere (World Bank, 2010), though the level of air pollution in the city of Delhi took a relative dip during the nationwide lockdown. A school teacher from Delhi remarks:

The problems we face due to pollution are really huge. Someone should actually see how many people are dying because of health issues, especially cancer. Right now because of Covid everyone is home. Once it is gone, everything will be the same. Not just the politicians, even we won’t learn anything.

The above statement brings forth the fragility and susceptibility of the present state of urban infrastructure in the capital city of India. Air pollution from transport, industry, domestic heating and waste incineration has been found to be responsible for increasing respiratory and cardiovascular diseases in cities (Sunyer et al., 2002). Geographic neutrality is also assumed when environmental controls are placed on a specific hazardous agent or pollutant (e.g., lead, asbestos and radon), the environmental medium or less frequently, the route of exposure (e.g., drinking water and ambient air). In each of these scenarios, cumulative exposures from multiple hazardous agents that have effects on communities are rarely considered (Suter II, 1992; Warren, 1956).

Further, urbanization with its socio-economic diversity has reproduced existing social discriminatory practices in specialized and nuanced ways. Segregation of spaces and marginalization in the social and economic spheres based on caste is part and parcel of Indian society (Ghurye, 1969). An individual’s class and caste position is a major determinant of the space occupied by him/her in the city. Segregation reduces the likelihood of any social interaction across social groups. Religion is another factor along with caste and class in determining the distribution of space. Muslims in Indian cities have often been victims of discrimination. A school teacher based in Bangalore remarks:

It was so easy to find rooms in Bangalore before. But now, as soon as they hear my name, the malik will say the room is rented or give some kharab (lame) excuses.

Narratives point out along with the emotional and physical readjustments they are excluded from the city space because of caste and class tendencies which in turn lead them to move to ramshackle houses. Urban migrants face several barriers in terms of access to civic amenities, housing and employment, as well as restrictions on their political and cultural rights because of linguistic and cultural differences. Many point out that along with emotional and physical readjustments they are excluded from the city space because of caste and class tendencies which lead them to move to ramshackle houses. The unfamiliarity along with the bewilderment on encountering urban space makes their lives much more arduous. These discriminations are articulated in various parts of India in the theory of ‘sons of the soil’, which evoke anti-migrant sentiments (Hansen, 1999, 2001; Weiner, 2015).

**Vulnerabilities of Urban Informal Settlements**

Ironically, while economic growth in the cities has been burgeoning, a majority of the urban population is deprived of basic amenities including housing and safe drinking water. Such exclusive growth has provided a breeding ground for proliferation of slums and squatter settlements that provide accessible
and affordable housing to the majority of the urban poor. Though there are regional variations in defining slums, under Section-3 of the Slum Area Improvement and Clearance Act, 1956, slums have been defined as ‘mainly those residential areas where dwellings are in any respect unfit for human habitation by reasons of dilapidation, overcrowding, faulty designs of buildings, narrowness or faulty arrangement of streets, lack of ventilation, light or sanitation facilities or any combination of these factors which are detrimental to safety, health and morals’. Such a definition, that stems historically from the British experience in the industrial era that has ‘inappropriate associations to poor urban settlements of Mumbai, Dhaka or Lagos’ reproduces the conditions of slum settlements as ‘irresistible spreading sites of squalor, crime and immorality’ and are therefore seen as hurdles for development and hence must be removed (Seabrook, 2009).

One of the largest slums in Asia, Dharavi in Mumbai, has between 800,000 and one million people within a square mile, and is 12 times denser than the already dense city of Mumbai and roughly 30 times denser than New York City. Unlike Manhattan, the low-rise and high-density environments in Dharavi manifest in smaller dwellings, with little or no space between them, and very narrow access lanes that make it difficult to maintain the recommended 2 metre (or 6 feet) ‘social distance’ for COVID-19 mitigation. This is exacerbated by the fact that a large proportion of slum households is compelled to traverse their neighbourhoods for such basic needs as water and sanitation. The 2011 Census of India indicates that while 81% urban households have access to latrine facilities in the same premises, the number slips down to 66% in the case of slum households. Out of 46.7 lakh (4,670,000) households that lacked toilet facilities at home, 20 lakh (2,000,000) depended on public toilets while 26 lakh (2,600,000) households used open space for latrine purposes. It must also be noted here that only 57% of slum households in the country had access to potable water and location of the source of water for only 37% of the households was located near (less than 100 metres) the premises. Around 11% of slum households had their source of drinking water at least 100 metres away from their homes and also shared a toilet with other households. Extreme cases include slums such as Dharavi in Mumbai, where estimates suggest one toilet per 1,440 people (United Nations Development Programme, 2006).

These realities, where reliance on community-level resources is a norm rather than exception, make it harder to maintain social distancing. A key expectation is that a home-quarantined person will stay in a separate room for 14 days and will not come in contact with other family members aside from a designated member who will provide care and support. While nationwide data on dwelling size in terms of square footage is not available, remote-sensing studies have established that dwelling size in India’s slums is small (Kit et al., 2012). Analysis of National Family Health Survey 4 data reveals that homes in cities are overcrowded and homes in slums are even more crowded: an average slum household has 3.2 persons per room, while an average non-slum household has 2.9 persons per room. An average home in the slums comprises 1.7 rooms for 4.7 occupants. About 86% of sampled slum dwellings have two or fewer rooms and 43% of them do not have a separate kitchen. Such substandard and overcrowded living conditions indicate the wide-scale poverty and heightened socio-economic inequality that exists. These shared spaces in Indian cities became the perfect vector for transmission of viruses.

The World Bank had observed in a statement that the ongoing COVID-19 crisis could push 71 million people into extreme poverty in 2020 under the baseline scenario and 100 million under the downside scenario (World Bank, 2020). The unfolding impact of COVID-19 is expected to potentially reverse the progress made over decades in eradication of poverty and hunger. The poor, especially, daily-wage labourers and slum dwellers are especially vulnerable in such a scenario owing to the poor health and higher mortality rates among them. Racial and caste disparities further reinforce such conditions (Rajan et al., 2020). The COVID-19 crisis in the cities added a new dimension to the anguish of the vulnerable. It exacerbated existing inequalities in the cities. Fault lines got magnified because land scarcity did not
allow for the creation of new spaces for the urban poor. Urban infrastructure, while being a politically neutral object, in fact, reconstitutes meanings of belonging and citizenship based on its availability to different settlers in urban settlements. Nikhil Anand in his work *Hydraulic City* argues that water resources in Mumbai are ‘both productive and reflective of the state institutions’ (Anand, 2017, p. 10). In viewing physical infrastructures in the postcolonial city as ‘unsteady accretions of different and dispersed social and material relations’, he argues that the splintered nature of Mumbai’s water system is as much a colonial doing as neo-liberalism in the twentieth century (Anand, 2017, p. 14). It is argued that the inadequacy of water or electricity connections, in addition to depriving slum dwellers and the poor of basic amenities, also weakens their citizenship claims to the city. The urban universality of the pandemic and impossibility of social distancing make it tough to tackle the situation.

**Urban Policy and Migrant Issues**

The policy focus has been for a few decades to enable Indian cities to rapidly urbanize as it is estimated that 75% of India’s GDP would be from its urban centres (Gupta, 2019). Indian policy-making has historically been using a top-down approach since the First Five Year Plan. However, the 74th Amendment has envisaged the decentralization of governance and power to local urban bodies. Both the Smart Cities Mission and Atal Mission for Urban Rejuvenation and Transformation launched in 2015 a few programmes for holistic urban renewal. Contrary to the policy attention directed towards the urban, no policy initiatives have occurred to ensure self-sustainability of the rural areas. Consequently, government programmes fail to reduce the unmanageable rural to urban migration which continues to stress the urban infrastructure and reduce the urban standard of living. In addition, migrants do not figure as beneficiaries of urban infrastructure development programmes or receive access to various social security programmes (deHaan, 2011; Government of India, 2017b; Kundu & Saraswati, 2012; UNESCO, 2012).

The marginalization of migrants in public policy-making occurs when the volume of urban migrants is estimated to be 175 million (Chief Labour Commissioner, 2020). The Interstate Migrant Workmen’s Act, 1979 is the only major legislation for migrants till date but it falls short as it majorly focuses on contractor driven migration. The existing labour laws are devoid of any focus on migrant labourers, despite them constituting a large portion of the informal labour in India. Additionally, Pradhan Mantri Awas Yojana that was launched to provide affordable housing for the urban poor, and the Jawaharlal Nehru National Urban Renewal Mission that was launched for initiating massive city revamping projects for providing equitable housing did not noticeably improve the life of migrant workers (Sharma, 2020). Although the Indian Constitution does have laws which have the potential to diminish this impasse in an orderly manner, the reality is different.

Migrant labourers endure more due to the lack of any concern for them in government policies. The invisibility of migrants is also reflected in inadequate statistics (Rajan, 2020b). For instance, migration data as a part of employment and unemployment was last collected by the NSSO in 2007–2008. The state’s negligence of migrants was evident with the sudden announcement of the lockdown which forced panic-stricken migrants to trek back home that being the only option left to them in the absence of rail or road vehicular transportation (*The Guardian*, 2020). Migrants are only visible when they are portrayed as victims of economic exploitation and sexual oppression (particularly of women), thus denying their agency (Kapur, 2012).

As inferred from Table 3, it is clear that though major cities contributed to the majority of COVID-19 cases during the initial waves of the pandemic, the virus had reached the remaining districts including hinterlands by the final week of September 2020. As there is no district-wise data available, Delhi is not
included in the list. Several concerns have already been raised about the inadequate state of rural public health infrastructure and the vulnerability of the rural population, especially the rural poor. However, several studies point out that rural residents are protected owing to their spatial dispersion, and the ‘spatial proximity of urban residents and their reliance on common public resources leave them more vulnerable to communicable health threats’ (Montgomery, 2004; Hardin, 1998). Although the country is becoming embroiled again with the pandemic spread, evidence from studies on assessing the link between urbanization and food insecurity levels suggests that urban growth in developing countries, resulting from ‘poor planning and management of human settlements and physical environment’, can have adverse effects on a country’s food insecurity levels (Szabo, 2016). It is further observed that food insecurity is most pressing in slums and informal settlements and is further exacerbated with extreme weather events, natural hazards and disasters, such as the on-going worldwide pandemic (Szabo, 2016).

Moreover, with a rank of 94 among 107 countries in the Global Hunger Index, India is home to the largest population of wasted children, pointing to the extent of its nutritional woes caused mainly by poor maternal health, poor hygiene and inadequate primary health care infrastructure (The Hindu, 2020). Further, a report by the International Food Policy Research Institute states that ‘malnutrition is endemic to India’ and that 64% of rural Indians can not afford a nutritious meal (Murti, 2020). In this context, the urban specific nutritional aspects, including the urban population’s greater dependence on cash income and their diminished reliance on surrounding natural resources, weaker informal social networks, hurdles in accessibility to potable water and sanitation services, high costs of private health care, absence of formalized social safety nets, greater exposure to environmental hazards and legal hurdles in improving their livelihoods all expose the existing potential for damaging consequences especially for the urban poor (Montgomery et al., 2003, p. 262). Moreover, the demonetization of higher currencies in 2016 and subsequent economic impact forced migrants to shift to lower-wage jobs.

While the cities became eerily quiet due to the harsh lockdown, hunger and deprivation hit the migrants with their savings all dried up. Migrant workers ended up being the unwanted. Certain states closed themselves off from the home-bound migrant ‘caravans’ travelling by foot because of the fact that these fleeing populations might spread the virus. The states were hoping that they would be shielded in an impenetrable cocoon that would keep out the virus which was circulating outside their well-protected walls. The preponderance of evidence underpins the fact that initially COVID-19 was more of an urban affair, which later extended to the hinterland (see Table 4 for details).
Table 4. COVID-19 and the Need for Rural and Urban Development Planning

| City       | Growth Rate of COVID Cases | COVID Deaths Per Million Population |
|------------|---------------------------|------------------------------------|
|            | 1 July 2020 | 1 September 2020 | 1 November 2020 | 1 January 2021 | As Per 2021 Projections |
| Mumbai     | 9.13        | 0.86             | 0.76            | 0.14           | 860.78                   |
| Thane      | 37.70       | 2.40             | 0.67            | 0.14           | 371.34                   |
| Pune       | 16.72       | 6.66             | 0.87            | 0.12           | 631.80                   |
| Chennai    | 54.74       | 1.26             | 0.47            | 0.13           | 806.89                   |
| Ahmedabad  | 5.42        | 0.50             | 0.35            | 0.35           | 251.57                   |
| Indore     | 2.12        | 1.80             | 1.58            | 0.62           | 201.41                   |
| Kolkata    | 32.82       | 5.54             | 1.02            | 0.50           | 668.51                   |
| Lucknow    | 4.57        | 22.53            | 1.26            | 0.24           | 192.90                   |
| Patna      | 16.23       | 27.16            | 0.70            | 0.36           | 52.60                    |
| Bengaluru  | 36.52       | 23.97            | 1.56            | 0.15           | 305.13                   |
| Delhi      | 23.02       | 0.97             | 1.22            | 0.46           | 518.81                   |

Source: The authors (compiled and calculated from COVID19.org as of 1 June 2021).

A study conducted by the Centre for Equity Studies also asserts that the migration from rural areas to cities take place due to the existing impoverishment in the rural areas which leaves individuals and families without an alternate choice (Mander & Sahgal, 2010). Some of the youth migrants in cities are well educated, but there is an imbalance in human resources needed for progress in rural areas and therefore unequal development between the rural and the urban. The pandemic-induced reverse migration presented the government with an opportunity to concentrate on building rural infrastructure focused on improving the agrarian policy. Village-centric redevelopment planning needs to keep in mind the need for affordable and accessible health services along with basic infrastructure. Digital infrastructure must also be developed to support rural businesses and workers. Concessional loans and storage aids for meat and dairy farmers could also be provided.

The cholera epidemic in the nineteenth century sparked off the introduction of modern urban sanitation systems. With the advent of digitalization, the data available has altered the urban social and spatial organization of life in the way we navigate cities and how communities mobilize and advocate for change. Therefore, the need to re-evaluate the prevailing urban planning systems becomes indispensable. This revised urban development planning must take into account the need for affordable housing and public spaces. Development of affordable suburban homes for the same purpose is crucial in accommodating a large section of urban migrants. There is also a pressing need for granular data at the city level that could be achieved with robust digitalization of urban governance. Additionally, environmental concerns, including the carbon cost of development must also be addressed while planning for sustainable urban planning. Well-ventilated open spaces, watersheds and forests, along with investments in sponge city infrastructure provide a buffer during extreme weather events, including flooding. Further, government intervention in implementation of efficiency standards of vehicles, and investments in renewable sources of energy will aid in bringing down environmental contamination. Schemes including FAME India must be implemented at the state and central levels to encourage electric vehicles.

The challenges for a country like India are amplified as we need to plan for migration of over 300 million people from rural to urban areas over the next 10 years. An alternate urban model of dispersed development is likely to create many more challenges, the most important being the acquisition of much more land than before and building more trunk infrastructure.
Conclusion

The COVID-19 crisis has been the litmus test exposing the vulnerability of Indian cities and demanding that policymakers redefine what constitutes a city. The exodus of migrants during the lockdown must be taken into consideration as the culmination of their grievances. It also offers an opportunity to assess the preparedness of our cities to prevent crises such as the ongoing pandemic and reimagine our present understanding of public space. The airborne nature of COVID-19 requires well-ventilated public spaces for common use. Inclusive designing practices must emphasize natural ventilation as the virus thrives in poorly ventilated spaces. A more holistic revamp of urban public space would require the creation of forests in urban sprauls, preferably using the Miyawaki method that aims at restoring forests from seeds of native trees on highly degraded waste-laden soils which were deforested and lacking humus. This would partly reduce the environmental threat to the urban population. Further, the pandemic has also brought out the importance of proactive planning and management of urban spaces which aid sustainable urban growth. Towards the same end, there is a pressing need for robust data collection methods to make sure the benefits of economic growth are shared by all.

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Notes

1. https://theswaddle.com/podcast/the-covid-19-pandemic-and-the-future-of-urban-spaces-in-india/
2. Sponge city is a mode of urban construction in which urban water management protects the original urban eco-system.
3. FAME India scheme (Faster Adoption of Manufacturing of (strong) Hybrid and Electric vehicles in India) launched by government to promote eco-friendly vehicles.
4. A higher order development infrastructure supplied by the local government or state-level infrastructure agency.

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