

Urbanisation, Slums and Incidence of COVID-19: Undertaking Reforms

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ABSTRACT

COVID-19 being the headliner of the year 2020, in the absence of a vaccine or medication, has engulfed the whole world. In India, though the lockdown was conceived as a response at a very early stage, the number of cases have multiplied more than 1000 times since then. Data emerging since shows that the outbreak is primarily urban and given the life conditions in the Indian urban areas in general and slums in particular, there had to be a connect between urbanisation, slums and the incidence of COVID-19. The following note first establishes the above-mentioned fact with special focus on slums. In managing the spread of the virus and taking effective measures in responding to its spread, the vulnerabilities of these ever-expanding cities/ slums have been exposed, once again emphasising the need for higher investments in public health, improvement in the state of the slums and eventual creation of affordable houses, more than ever.

Keywords: COVID-19, Governance, Public Health Infrastructure, Slums, Urbanisation

'More than ever before, there is a global understanding that long-term social, economic, and environmental development would be impossible without healthy families, communities and countries.'

– Gro Harlem Brundtland (GoI, 2020)

INTRODUCTION

Originating from the city of Wuhan in China, SARS-COVID-19 has become a global household name over the past five months, and not

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in a pleasant way. Over eight million COVID-19 cases, claiming 4,35,000 lives, have been reported globally as of June 17, 2020. Knowledge of possible devastating consequence of the pandemic and the will of the citizenry towards self-protection, not to mention a bit of political leadership, has played its part in preventing its spread to the worse (Guru, 2020). Since the pandemic apparently has covered rich and poor nations alike, it has questioned the health infrastructure of all. Even the developed nations with well-established public health facilities could not contain the outbreak and had to eventually announce a lockdown. Fortunately, India had examples to learn from the global experience. Prime Minister Narendra Modi announced a complete lockdown of the nation at nearly 350 COVID-19 positives. Despite (or because of) the lockdown, today we stand at (only) 3.5 lakh cases, mostly concentrated in highly urbanised centres of the country.

The pandemic has caught the world by and large, but especially us, unaware primarily on two fronts. Firstly, the lack of adequate public health infrastructure, and secondly, the matter of socio-economic integration of the poor, in particular slum-dwellers and migrants, in the urban system. Needless to emphasise that what lays ahead of us, as we try to emerge from COVID-19, is an 'unimaginable economic pandemic' (Chakraborty & Thomas, 2020). Whilst the government with the help of various task forces is trying to do the fire-fighting, in this piece we are primarily concerned with identifying what is missing and the reforms to be carried out going forward so that we are better prepared when such an eventuality comes upon us the next time around as it inevitably will.

This article consists of six sections. Starting with an introduction, the paper underlines in Section 2, the positive correlation between urbanisation, slums and the incidence of COVID-19. Section 3 elaborates on the plight of the marginalised slum dwellers. Section 4 describes some challenges that lay ahead of the economy in the upcoming post-pandemic times. Section 5 suggests a road ahead that elaborates on the suggested vision for social sector investment in future. Finally, the last section suggests the reformatory action plan indicating the correction of essential institutional fundamentals in urban areas.

URBANISATION AND INCIDENCE OF COVID-19

The pressing priority today is to understand the weak links in our system not only to manage it now while it is spreading like wildfire, but also to manage such a crisis better in future. Therefore, to review the spread of COVID-19, it may be worthwhile to meditate upon its linkage with urbanisation. In order to validate the aforementioned point, the authors used a few proxies, advisedly using simple statistical tool, and

found the correlations enlisted in Table 1. Along the lines, they found a considerable positive correlation of higher rate of urbanisation and the corresponding high slum population with the increased incidence of COVID-19 in Indian States.

TABLE 1: CORRELATION BETWEEN STATE- WISE URBANISATION, SLUMS AND COVID-19 OUTBREAK

<i>X Variable</i>	<i>Y Variable</i>	<i>Correlation Coefficient</i>	<i>Correlation</i>	<i>Inference</i>
Total urban population in the State	Number of COVID-19 cases in State	0.74	Strongly positive	Urban areas are the centre of the outbreak
Number of Class I towns in the State	Slum population in the State	0.67	Moderately Positive	Higher slum population in bigger cities/ towns
Number of Urban Agglomerations in States	Slum population in the State	0.68	Moderately Positive	Higher slum population in Urban Agglomerations
Slum population of States	Number of COVID-19 cases in State	0.70	Strongly Positive	States with higher slum population have higher incidence of COVID-19
NSDP of States	Number of COVID-19 cases in the State	0.82	Strongly Positive	Richer States are worst affected by the outbreak of COVID-19

Source: Computed by authors using (MoHUA (GOI), 2019), (Census, 2011), (Chandramouli, 2011)

Perhaps a word about the computations reported above is in order. Strictly speaking, we should have normalised the variables by taking into account and benchmarking the COVID cases *vis-à-vis* slum population in the relevant city et al. But given that this is an evolving situation with numbers changing on a daily basis it would still be prone to criticism. However, the authors opine that the essential point of their having a significant value would not be affected. Also, the purpose here is to merely flag the overwhelming prevalence of COVID cases where slums exist as well as where there are economic poles.

The positive correlation between urbanisation and COVID cases can be explained by the nationwide lockdown that prevented the spread in rural/ lesser urban areas as the origin of the disease is not India. People having history of International travel used airports located in urban centres and most of them were blockaded due to the lockdown, making the incidence of COVID-19 thick in here. Ironically, although rural India was protected by the lockdown, urban villages/ slums were forgotten or perhaps could not be protected to the same extent. A similar point can be made when the correspondence between Net State Domestic Product (NSDP) and COVID-19 cases, and slums and COVID-19 cases is read together. Alternatively said, in a certain sense COVID-19 becomes an issue of the richer states and unfortunately, of the poor people within these rich states.

PLIGHT OF THE SLUM-DWELLERS: TRYING TIME

Speaking plainly, most of the poor/ slum-dwellers work to earn their meal everyday and cannot afford the lockdown for too long. Even with the easing of the lockdown, employers of slum-dwellers are reluctant to call them back to work owing to fears of COVID. Stating the obvious, slum-dwellers here don't have a great set of choices. Though the lockdown challenged their income flows, the expenses were still on track. A considerable share of slum dwellers/ informal workers in Mumbai occupy their residence as tenants. Though the government announced relaxation in rentals, on ground, most of the landlords will be in distress in case of defaults as the rents so accrued forms a considerable part of their income. ("Plight of the Stranded Workers," 2020). Besides, poor people have to step outside for work, groceries, etc. as they lack both resources and space to stock up. Though free food is being distributed in some slum neighbourhoods by authorities, NGO's and in individual capacities, people coming out in close proximity for its collection defeats the purpose of a complete lockdown. If they don't step out, they will die due to hunger, the probability of which is way high. Another transmission hotspot in slum neighbourhoods is the community toilets. Also, let alone the use of sanitisers by the poor, frequent hand-wash is also possible only when there is piped water connection in these slums. According to National Sample Survey Office (NSSO) data, 40 per cent of urban households do not have access to piped water inside their residence (Khan & Abraham, 2020).

A dual segment has been created over time with the commercialisation of healthcare where the rich accesses the private medical care and the poor resorts to the impaired public health system (Parmar, 2020). Once again, slums are under focus from the public health viewpoint. In fact, in testing times like now, the absence of sufficient slum improvement

policies in state agenda is apparent. Moreover, owing to minimal investment on public health over the years, it is presumed that there is a considerable underreporting of COVID cases in India. There have been incidents where the poor people have died before reaching the hospital, but they were not tested to ensure the most efficient use of the limited COVID-19 test kits. Also, given the limited capacity of government labs and high costs of testing at private labs, it is undeniable that the unintended/ unsaid casualty will be of nation's poor population. The testing capacity in the state of Bihar, (one testing facility for 110 million population) is a display of insufficiency at its worst (Kumar & Kumar, 2020). Public health is under due surveillance worldwide and even higher in developing nations.

It is true that the poor people are unable to afford the Out-Of-Pocket Expenses (OOPE). In India not only OOPE, but even the regular medical expenses are quite high. The budgetary allocation for public health in almost all the states has been quite dismal. The argument here is that since the states have been ignoring the public health of their citizens over the past years, it is costing them heavily now. Besides public health, extreme dearth of affordable housing in urban centres that create opportunities for slum creation and their sustenance becomes an even bigger focal point. Increased incidence of COVID-19 in slums has highlighted the impossibility of social distancing and home quarantine, both inside a slum and within a slum neighbourhood.

CHALLENGES AHEAD

Undeniably, we have failed to manage our cities and the systems governing it on multiple fronts. It is argued that privatisation of public services like health and public distribution has exposed their fragility to such a critical situation (Harilal, 2020). The foremost challenge is to keep the institutional memory strong enough so that the lessons drawn from the current situation persist post-pandemic. Some lessons from Kerela might be drawn here. They made planned investments in public healthcare system to enable them to expedite testing in case of COVID-19 and execute required measures faster than any other state (Roy & Dave, 2020).

Another challenge the pandemic is bound to confront is for the real estate sector. Since work-from-home has been experimented for long enough during this 68-day lockdown period, it may become a new working model for some corporate. Consequently, the palpable impact on commercial real estate prices along with the response of the residential real estate segment could bring an interesting downward trend in the real estate markets of high-priced urban spaces. The real

estate prices are observed (casual empiricism) to have dived to a level that is 25 per cent lower than the ready reckoner prices. (Pethe, 2018; (Pethe & Sharma, 2019). Returning to the subject, in the first instance, simplification and rationalisation in the real-estate segment will incentivise investment which would kick start the economy as it is well known that construction always leads to a recovery. More pertinent to the theme of this piece, a comprehensive reform in the housing sector policy (rental policy included) will help investors find a revenue model in the segment of low cost housing and would be incentivised to invest in it, which will make a significant dent on the issue of slums (Tandel et al., 2016).

It is argued that welfare state, regulations, license raj, socialistic state, rural economy are more bankable arrangements in such times (Roy & Dave, 2020). However, given the limited capacity of the state and the fact that it is very easy to resort to these so-called safer bets in the time of crisis, but very difficult to wean away from them post-crisis and to get back to the dynamics of the private sector.

ROAD AHEAD

The global crisis is just expected to go deeper in the coming weeks. Having been reminded time and again of the areas that are most affected in crisis times, the requisite measures are most often not planned and executed with a true intention of improving the situation permanently. Whatever comes from the State is knowingly *make-shift* that wipes-out and is forgotten post-crisis. The State needs to step back a little to view the macro economic turmoil holistically and create fresh agendas, re-route and revise the plans, set new multi-directional targets whilst the long-term vision is complemented with short and medium-term targets with checks at various milestones (Pethe & Nallathiga, 2010). For starters, we need to be realistic and accept that the phrase 'slums free city' belongs to fiction, especially for countries at a stage of development like India. Without asking for much, slums provide an optimal housing solution to poor, provides low cost labour to the city, demonstrate the most efficient use of space, exemplify as a proven centre for entrepreneurship, to name a few. The slum profile has transformed over the years from an illiterate, unaware clusters of poor, to dynamic neighbourhoods sheltering even LIG and MIG households. It is time we accept them as a part of urban areas and start providing for the basic services at least. Alternatively said, instead of treating slums merely as vote banks that are paid back in terms of small gifts like community toilets, there is a need to step-in a big way with a multi-pronged agenda for their betterment as soon as the pandemic settles down.

Given the current pandemic exigency, the priority investment sector is undoubtedly public health. The budgetary allocation on public health has been dismal at 1.6 per cent of the GDP in 2019-20. This share includes expenses on medical and public health, family welfare and water supply and sanitation (all more important than one another). Implying, the expenditure on 'health' at national level is as low as 0.5 per cent of the GDP (GOI, 2020). It is therefore a sensible policy choice to increase the allocations permanently rather than temporary spikes in crisis time. As witnessed presently, any further neglect in the same would cost the exchequer much more, purely in economic and financial terms, forget about the human cost involved. Though the OOEPE has reduced from 64.2 per cent in 2013-14 to 58.7 per cent in 2016-17 (GOI, 2020), it is considerably high compared to global standards. Even with designated quota for treatment of the poor in private health care centres, the implementation has been rather disappointing. An extension in the coverage of the policies like National Health Policy and Ayushman Bharat from the current 10.4 crore poor to all those who struggle to afford medical services, would be a good start. Not to mention, all such policies are expected to conclude at an infallible implementation and delivery mechanism. Moreover, an understanding between the private and public sector in case of such health emergencies is a must to mitigate the socio-economic effects (Parmar, 2020). Apart from an increased investment in medical facilities, the purchasing power of the poor to afford these services needs to be minded.

Since categories under social sector near or far complement each other, alongside public health, investment in social sector needs to be increased on the whole. Integration of slums into the existing city systems like sanitation, waste-water disposal, solid waste management, sewage and drainage, etc. should be a priority for one and all at every level. Second, the integration of slums needs to be complemented with data collection in order to facilitate the inclusion of slum dwellers. Concurrently, investment in education sector is critically important. Even though 3.1 per cent of the GDP is being spent on education and is the highest allocation amongst social services, 37 per cent of the global illiterates are Indians, 92 per cent of government schools have yet to implement the Right to Education (RTE) properly and we rank 123 amongst 135 nations measuring female literacy rate (Oxfam India, 2015). Existence of disguised unemployment in agriculture, high rate of educated unemployed in formal sector and over 90 per cent employment being generated in the informal sector is a testimony in itself that though literates in India are equipped with reading and writing skills but are not skillful enough to be meaningfully employed. The State needs to rethink the definition of literacy in current times. When literacy was first

defined as “the ability to read and write at the age of 7,” communication was probably the required area of intervention. Now, when we stand at 74.4 per cent literacy rate, as per the aforementioned definition, the focus needs to shift towards provision for building a skillfully educated India and creating an enabling environment for creation of formal jobs and entrepreneurs. The remaining three per cent of the 7.7 per cent allocated to social services is shared between housing, urban development, welfare of SCs, STs and OBCs, labour and labour welfare, social security and welfare, nutrition, relief on account of natural calamities, etc.

Albeit, considering the stage of development of Indian cities, sizeable investments are required in all categories of social sector. Based on the turnaround time, it is suggested that these categories and milestones within each are classified into short, medium and long-term targets. For instance, public health, water and sanitation, family welfare, welfare of labour, nutrition, etc. may be intervened in the short period and medium term with continuation plans for long-term. Education on the other hand, has a greater turnaround period and needs constant plug-ins and hence should be on a constant radar at all times in long-term. Categories like housing and urban development (though already covered partially) have the longest turnaround period and need lumpiest investments of all. Nevertheless, housing must run in the agendas in a parallel manner. Since slums and associated peripheral issues exist due to dearth of affordable houses, the ultimate long-term goal in cities need to be creation of affordable housing stock. In the meanwhile, urban areas and slums should be made better places to live by integrating them with the city. Politically motivated policy solution, like the formation of Slum Rehabilitation Authority in Mumbai, has resulted in only creating more slums everyday than rehabilitated. Land being the primary roadblock for the provision of affordable housing, releasing public land in the market for the sole purpose of creation of affordable houses shall help. Certain other micro and macro-level challenges like higher unemployment in both organised and unorganised sector, increased poverty, etc. also need government’s focus at some point.

REFORMATORY ACTION PLAN

Decentralisation

This typically comprises of delegation, decongestion, and devolution. The first two are practical actions referred to as agency transfers where there is minimal autonomy at the lower levels. The underlying principle informing the utility of the concept of decentralisation is the subsidiarity principle which recognises the fact as one traverses lower in the system, there is greater richness of

information and generally prescribes that suitable actions can and should be initiated at that level to tackle the problem. The third aspect of decentralisation mentioned above viz., devolution, is most crucial and talks of devolving the resources and authority to diagnose the issue as well as design the policy or action plan and has the implicit autonomy to carry it out. Thus, it implicitly assumes the empowerment of the lower entity and expenditure autonomy towards the attainment of desired outcomes. The theme will be elaborated and expanded specifically in the next two points. Whilst there are enough hints and institutional support for this principle to be adopted in practice, decentralisation as an organising principle must underlie most actions and must be accepted wholeheartedly by the policy makers and government of the day, in letter and spirit. This requires more than just mindset change at the higher level of government but given that resources are transferred without strings implies a loss of power and this requires a certain amount of political will and maturity.

Urban Governance/ Management

Fighting wars and epidemics in compact and dense constructs like cities pose a special challenge. This is amply illustrated by the experience regarding Covid-19, in Mumbai (as in New York). But these are also spaces that rise to the challenge. The crisis allows us to revisit the crucial issues of city management and urban governance and maybe do something about to have a long-term positive impact. From an economic standpoint, India's future is urban. This is even true in the case of Maharashtra which is one of the most urban states of India. It is a fact that cities primarily be looked at from the twin lens of liveability and livelihoods. This involves provision of local goods and services including affordable housing on the one hand and creation of an environment that attracts investment leading to accelerated growth, which in turn creates jobs. On both these counts our cities leave much to be desired.

There is a lack of good governance and missing local public finance. Good governance may be seen to be made up of policy-framework (informed by basic economic principles), simplification of processes and protocols (transaction costs) and building of capacity to implement (delivery). There are well-known ways of working on each one of these components to achieve good governance. The first component is very important, if not informed by basic economic principles, it leads to unwarranted incentives for the agents who then take actions predicated on them leading to undesired outcomes. The second component is easiest to comprehend but not always very easy to do. This is because the

involved processes create a sense of power and vested interest amongst the bureaucrats at all levels who do not easily let go and hence defy any movement towards change. The third component is the capacity to implement the policies.

But most fundamental issue is that of resources and the empowerment of Urban Local Bodies (ULBs). The local governments are simply too weak economically and this needs to be remedied. The revenue handles that exist in the post-GST regime are inadequate even when exercised efficiently. Actually, the only revenue handle of substance that is now available with the local bodies is the property tax. A serious reform in terms of bands/ rates and most importantly the coverage is called for. For this, setting up of functional Property Tax Boards is a must. No one can argue against the need for reform in this arena. The fact however, is that no city in the world (with similar tax regimen) actually is able to finance more than 30 per cent of their expenditures. Thus, cities, whilst they are wealth and value producers, are at once not self-sufficient. This is simply the result of the way our tax system is set up. There is an inevitable need for the flow of funds from a higher level of government. Of late, the Central Finance Commissions have been proactive in lending their hand. These flows must not be seen as aid but rather as an investment so that the higher-level governments continue to benefit via tax buoyancy (among other things) resulting from well-functioning cities. The State Finance Commissions (SFCs) are the vehicles for such transfers from the state governments to local bodies. These SFCs must be treated seriously and their awards must implicitly have the same status as the Central Finance Commissions enjoy at the Central level. These are the minimal prerequisites that will ensure the 3Fs (functions, functionaries and finance) will be catered to properly and cities can begin to be empowered adequately.

We do not get into the crucial slum issues since they are too involved, and the currently extant approaches/ policies have not made a dent. But one thing is certain, since slums are a part of the overall housing sector which is highly segmented and each of the segment (except the highest one) suffers from excess demand, it is crucial that policies to incentivise private players to come forth and find a revenue model in the affordable segment of the housing sector. Without this an *antyodaya* type policy initiatives, by themselves trying to cater to the lowest rung, are bound to suffer from elite capture and fail. We have argued elsewhere how and why the wrong-headed policies must be reformed to improve outcomes. The two specific policies in this category that create impediments in the way of provision of affordable housing are the policies related to rent control and the Urban Land Ceiling Act

(ULCA) (Pethe, 2010)(Tandel et al., 2016)(Pethe & Sharma, 2020). The policy of rent control has virtually killed investment in rental market and shut this affordable option for many citizens. The ULCA has the distinction of having traversed the path of being dysfunctional when in operation and continuing to be so even when it has been removed, with the effective land supply continuing to be scarce, compounding the problems brought about by the restrictive linear geographical boundaries of Mumbai. In the same vein, we need to revisit the entire arena of Development Plans (DPs) (Pethe et al., 2014). They should be related to relevant budgets and have prioritisation and rolling character built in. They should be minimalistic and strategic rather than overly detailed. In the matter of city management and empowerment, it may be useful to seriously look at the transformative and comprehensive Sharad Kale Committee Report submitted several months ago to the Urban Development Ministry, Government of Maharashtra. In sum, to list some action plans in this context:

- Empower ULBs economically by transferring all possible revenue handles and decentralise (devolve) in true sense.
- Take SFCs seriously and give the same sanctity to its awards (formulaic devolution) as Central government provides to its Finance Commission awards.
- Set up Property Tax Board to reform, regulate and monitor implementation.
- Reform Rent Control and ULC policy to enable rental market to prosper and hence help with revitalising affordable housing market.
- Simplify processes and protocols to reduce transactions costs.
- Set up an Urban Observatory (real time) complete with IT leveraged data visualisation (including shape files of wards/ maps) that would monitor outcomes independently.
- Capacity building should be taken seriously starting from a coherent HR policy right from recruitment and creating training modules/ manuals to facilitate the employees with carrying out their tasks. This should include budgetary reforms that provide expenditure trace.

Public Health Management

One of the lessons we can learn from facing the challenge of Covid-19 is that whereas some amount of vision and wherewithal comes from the top, a lot of the operations need to be planned to keep

in view the specific situations including geographies. Public health management is a case in point where decentralised effort may be most fruitful in terms of recognition of the problem, the felt needs of health-related equipment (hence procurement) and human resources. It is such places where we will most likely find delegated expenditure autonomy with oversight to be most useful and logistically tractable. The corona pandemic has revealed some important weaknesses of state and local governments in organising, enabling and delivering crucial services. Health services including dealing with epidemics is a state government subject but have to be delivered with the active participation of the local government. The public health centres, health care centres and hospitals of local bodies are known to be ill-equipped. This needs to be corrected with the active initiative of private and NGO sector participation on a PPP basis. The overall structure and design of the public health system call for a reform and politically it will be feasible to push it through just now. The capacity at the agent and agency level calls for a serious bolstering. The Universities and Government Administrative Staff Colleges can be roped in to create training programmes and help deliver them innovatively. The Universities could also set up PHCs dedicated to monitoring outcomes and collecting relevant data in a convenient form that could come in handy when another crisis strikes as it inevitably will.

It is essential that the State takes a major initiative in setting up Research Centres and Hospitals (in the nature of Crown entities) which would operationally run by the local bodies. These Crown entities would concern themselves specifically with epidemiology/ infectious diseases and would be adequately sourced. Some of these entities (especially field hospitals can be set up as temporary ones in an innovative way so that they go back to other utilities but with an easy and fast reversibility if the contingencies arise. Apart from capital assets, the softer resources such as medical support staff are absolutely essential and some long-term measures like encouraging courses in nursing (which for some reason have been banned/ certainly not encouraged in Maharashtra) and courses in para-medical arenas so that such lack is not felt in the future. We could also have some thought on having reserve 'army' of such trained personnel that could be called upon as first charge if contingency arises.

Thus, some of the specific action points would be as under:

- Make a self-binding commitment to allocate sufficient budgetary resources to Public Health (from the current pathetically low level). This is required even if it is at the cost of some other expenditure head.

- Create pathways and delegated expenditure autonomy (for example, for procurement of health equipment and temporary human resources) and most importantly capacity to efficiently and effectively use these resources (State Budgets as well as Central Fund flows) for targeted outcomes.
- Set up PHCs of Research in the University to document, collect relevant data and monitor outcomes *a la* Independent Evaluation Office (IEO).
- Use Universities and Yashwantrao Chavan Academy of Development Administration (YASHADA) like organisations to develop and deliver training capsules and programmes to build capacities of agents and agencies.
- Set up Research Centres and Hospitals in the nature of Crown entities which would be operationally run by the local bodies specifically focused on study of epidemiology and infectious diseases.
- Take actions to be prepared with availability of physical assets and more importantly supportive staff who can be called upon at a moment's notice.
- Slightly more difficult area of reform and experimentation could be introduction of PPPs in the health sector. Learning from what little success we have elsewhere needs to be imbibed and attempted to be put into practice.

Statistical Board

Not just in diagnostics of Covid-19 or in taking action related to its containment, even otherwise the general lack of data availability has been seen as a major problem in providing empirically evidenced and data-driven policy formulation and action. Different departments in the government, indeed, collect data on various variables and attributes, however, neither is it compiled in a user-friendly form nor is it available in public domain. It is in this context that there is a felt need to set up a Statistical Board. It should be set up by considering the architecture carefully based on the underlying information policy of the State so that proper gateways are provided for different categories of stakeholders. The architecture could be decentralised and hierarchical but would need careful thought. This would be easily possible using IT and indeed the data could be available in different visualisation forms, including geographical mapping which is hugely important in carrying out the logistical exercise. *Creating a comprehensive yet modular empty shell and then fleshing it out strategically and severally is the way.* Directorate of

Economics and Statistics should be leveraged for this purpose and perhaps reviewing the report on DES - Restructuring (Chair: ACSGAD) submitted a few months ago, could be a starting point. Most of the State governments suffer from information and data deficiency in many several areas/aspects. The system of data and information collection is inadequate, slow and based on the old regulatory paradigm. DES should change itself as a big data generation agency in following ways. As an important aside, the really important feature here should be that instead of collecting the data every time, protocols should be mandated such that the data from different sections/ departments should seamlessly flow into the Data base/ warehouse so set up.

In the present context, the very least we could do, as a part of setting up of the Statistical Board is to create Urban Observatories. These would be more than just haphazardly collected data or even a well-compiled data base but more in the nature of live data warehouses. These would be real time (live) data structures covering different dimensions and physical and financial indicators and outcomes within the geographies of cities. The representation would be through numbers maps and innovative data visualisation techniques. Suitable gateways could be provided (as per the information policy of the State) for different stakeholders (government/ non-governmental agencies et al.). Given the extant prowess which we are proud of in the areas of IT and GIS among other things, surely this is doable. It would then provide an empirical basis for evidence-based decision making and the NGOs and others would be able to perform the role of responsible watchdogs ensuring accountability on part of the government of the day. We may mention here, as an important aside, that this kind of granular data (implied above) if available, would have allowed us to tackle the issue of fleeing migrants far more efficiency and with far fewer human costs involved. We may mention that such a comprehensive slum census is implicit in the JnNurm pre-requisites but have not been complied with. The presence of slums and the associated informality makes the coverage of any policy incomplete in the absence of a granular database. Not to mention, missing on paper is a sure miss from policies. In order to be better equipped next time around, the starting point must be acquisition of data. To repeat, even with the resource crunch, the lockdown in India could have been dealt in a much organised way even if simple habitat information was available for migrant workers like their resident slum, state from where they have migrated, their workplace among other things.

Thus, we have identified the epicenter of the locus of Covid-19 and suggested a minimal and we believe doable reform actions, in reasonable

time frame, that would serve us in good stead in the future, with or without the recurrence of a crisis. It would be appropriate to say that urbanisation and high densities, when well-managed, are better in terms of carbon footprints and lead to agglomeration advantages and high productivity gains resulting in unprecedented growth and development (actual & potential) in India. The tremendous agglomeration advantages of compact and dense cities should not be lost sight of. India's future continues to be urban and let's not detract from this fact.

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