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India's Hidden Urbanisation & Its Policy Implications

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INTRODUCTION - PRAGMATIC APPROACH TO URBANISATION

We are living in the epoch of urbanisation. Cities have been engines of economic growth for several centuries but their centrality in global production and consumption has accelerated in the last five decades at an unparalleled rate. A McKinsey report as far back as 2012 noted that just 440 cities in developing countries would be responsible for over half the global GDP growth in the subsequent decade[1]. As an aggregate, the GDP of cities in Asia is slated to exceed the European and North American cities combined, by 2027, as per a 2018 report by the research institute Oxford Economics[2].

India has been and will remain a major locus of the global urbanisation story. The same report by Oxford Economics highlighted that out of the world's 20 fastest-growing cities between the years 2019 and 2035, 17 will be in India[3]. This list predictably includes metropolitan regions like Bengaluru, Hyderabad and Chennai. Interesting to note is the inclusion of Surat, Agra, Nagpur, Tiruppur, Rajkot, Vijayawada and Tiruchirappalli in the top-10 fastest growing cities of the world. This suggests that the next chapter of India's urbanisation story will be written as much in these Tier 2 cities as in the recognized metropolitan regions. Therefore, the national conversation and policy focus on urbanisation needs to equally cater to these newly urban and rapidly urbanising spaces of India, which are not adequately captured in the current estimates of urbanisation.

Understanding the true extent and pace of urbanisation in India is the starting point for policymaking that ensures that our cities don't suffer from diseconomies of scale and instead become growth hubs. Given this background, this EAC-PM Working Paper uncovers the hidden urbanisation in India based on satellite data and makes the case that urbanisations levels are much higher than those reported in estimates based on the 2011 census.

The paper also lays out a pragmatic framework to guide the effective use of Union government interventions such as the Urban Challenge Fund and makes the case that the implementation

[1]https://www.mckinsey.com/featured-insights/urbanization/urban-world-cities-and-the-rise-of-the-consuming-class

[2]https://www.weforum.org/stories/2018/12/all-of-the-world-s-top-10-cities-with-the-fastest-growing-economies-will-be-in-india/

[3]https://indianexpress.com/article/business/economy/top-ten-worlds-fastest-growing-cities-india-oxford-economics-5485520/; https://www.moneycontrol.com/news/business/economy/india-to-have-17-out-of-20-fastest-growing-cities-globally-between-2019-2035-report-3263151.html

strategy should be outcome based/focused. We identify five broad citizen-centric areas of welfare[4] namely

A. Residential Life
B. Transportation
C. Public Safety
D. Greening
E. Public Health

These indicators are composed of finer measurable indicators to benchmark the performance of cities and their administrators. Building on this framework, we identify metrics which are solely outcome based enabling administrative judgement and flexibility to guide processes and inputs required for achievement of outcomes.

The paper is divided into four parts, each focussing on a pillar of reform:

I. **Classification**: Identify what is "urban" for better targeting of policy interventions. It calls for a revised methodology to classify and delineate urban settlements, leveraging daytime satellite imagery and built-up volume data, along with population density on the ground. This is helpful to create automated trigger mechanisms that formalise the urban transformation and minimise the mismatch between demand and supply for urban public goods across the country.
II. **Governance**: Strengthen local institutions and empower city-level leadership through Urban Local Bodies and targeted administrative reforms that are necessary to achieve city-level outcomes distinct from general administration. We define five outcomes of interest (Residential Life, Transportation, Public Safety, Greening and Public Health) that impact ease of living for citizens the most and should guide resource allocation and performance appraisal.
III. **Financing**: To address the chronic underfunding of city administrations, we recommend expanding municipal bonds, outcome-based financing, and modernised systems for fines and user-fee collection. We also propose greater financial autonomy and a larger share in intergovernmental transfers that are essential to achieve the targeted objectives.

[4] Inspired by ideas presented in Yuen Yuen Ang's book China's Gilded Age; Ang YY. China's Gilded Age: The Paradox of Economic Boom and Vast Corruption. Cambridge University Press; 2020.

IV. **Land**: Reforming land-use and ownership frameworks to enable growth. Based on the performance of some states that have adopted innovative solutions, we propose multiple options to overcome these constraints.

The Working Paper argues that urban policy must now shift in three critical ways:

1. **From reactive welfare to proactive growth**: Union schemes so far have focused on affordability and utility. India must now map investment flows to cities and align urbanisation with long-term economic strategy for the country and its urban citizens
2. **From fragmentation to holistic planning**: Urban development must be comprehensive, covering governance, infrastructure, housing, mobility, and environment in an integrated way.
3. **From outdated classifications to modern urban analytics**: India must stop relying solely on legacy Census definitions. New data sources—satellite imagery, built-up volume metrics, and economic activity—must be used to reclassify urban areas in real-time.

Why Urbanisation Matters Now

Urbanisation is not just a demographic trend—it's an economic reality. As noted in a 2021 Niti Aayog Report, India's cities contribute 60 percent of India's GDP while constituting just 3 percent of the land[5]. Just two cities - Mumbai and Delhi - generate 50 percent of the total direct tax collections in India[6]. Therefore, from an economic standpoint, India is already urban-heavy with a majority of the national output being generated from cities.

Globally, a 1 percentage point increase in urbanisation is associated with a 3.9 percent rise in GDP per capita but in India, this figure is just 1.7 percent, reflecting the inefficiencies of its current urbanisation process.[7] Similarly, between 2015 and 2021, urban poverty declined by only 3.4 percent, compared to a 13.3 percent decline in rural areas - highlighting how India's cities are underperforming in inclusive growth[8].

[5] https://www.niti.gov.in/sites/default/files/2021-09/UrbanPlanningCapacity-in-India-16092021.pdf
[6]https://www.financialexpress.com/money/mumbai-and-delhi-regions-assigned-higher-direct-tax-targets-3840754/, https://www.outlookmoney.com/tax/big-direct-tax-targets-for-mumbai-delhi-karnataka-in-fy26-as-filing-season-begins
[7] https://wri-india.org/sites/default/files/State-the-Cities-Report.pdf
[8]https://www.niti.gov.in/sites/default/files/2023-08/India-National-Multidimentional-Poverty-Index-2023.pdf

Yet, the urban opportunity is still ahead. In 2011, only 31.1 percent of Indians (377 million people) lived in urban areas.[9] By mid-century, that share is projected to cross 50 percent, adding nearly 400 million people to India's cities.[10]

Seizing the Urban Moment

India stands at a crossroads: it can either continue with fragmented, unplanned urban growth, or it can proactively plan, govern, and finance cities as drivers of prosperity. The experience of cities like Gurgaon - without a municipal corporation until 2008 - illustrates the cost of neglect. The city faces several issues ranging from mobility challenges, waterlogging and extreme climatic conditions in the form of high land surface temperatures.[11]

Despite the lived realities and challenges thrown by unplanned development, Janaagraha's Annual Survey of India's City-System (ASICS) 2023 Report points that 39 percent of India's capital cities still lack an active Master Plan, and only nine cities have sectoral plans for areas like sanitation or mobility[12]. This is not just a planning gap; it's a governance and investment failure.

By way of illustration, Economic Survey 2026 highlights the consequences of low density norms in unplanned urbanisation and high land prices. The Floor Space Index in Indian cities is among the lowest in metropolitan areas around the world. Mumbai has an FSI in the range of 4. Delhi has an FSI of around 3. Pune and Ahmedabad are in the range of 3.5 to 4. Chennai and Kolkata are even lower at 2.5 and 2 respectively. These are much lower than other global cities such as New York, Singapore and Hong Kong [13].

Urban Infrastructure 2.0: From Connectivity to Productivity

Over the past decade, India has significantly improved inter-city and inter-state connectivity. The next phase must focus on **intra-city infrastructure**—transport, housing, sanitation, and utilities—where the **marginal productivity of public spending will be far higher**. Cities

[9] https://www.niti.gov.in/sites/default/files/2021-08/India_ActionAgenda.pdf
[10] https://www.janaagraha.org/wp-content/uploads/2023/10/ASICS-2023.pdf
[11]https://competitiveness.in/learning-from-mess-that-gurugram-now-is/#:~:text=These%20infrastructure%20issues%20also%20create,urban%20planning%20strategies%20and%20decongestion.
[12] https://www.janaagraha.org/asics/
[13]https://swarajyamag.com/economy/why-indian-cities-cant-build-up-the-economic-survey-on-land-as-dead-capital, https://www.scmp.com/property/hong-kong-china/article/1430455/hong-kong-government-considers-plan-cram-more-people

must become easier to live in, do business in, and govern with the eventual attainment of the citizen-centric areas of welfare listed above securing a high quality life for average citizens.

The Union government has laid the groundwork with key initiatives: AMRUT, Swachh Bharat Mission – Urban, Smart Cities Mission, HRIDAY, Pradhan Mantri Awas Yojana – Urban, PM SVANidhi, Deen Dayal Antyodaya Yojana. Building on this momentum, **Budget 2025 announced a ₹1 lakh crore Urban Challenge Fund** to develop "Cities as Growth Hubs", focusing on brownfield redevelopment and water & sanitation through market-led initiatives that was approved by the Union Cabinet in February 2026[14].

In Budget 2026-27,[15] the Union government again announced a slew of initiatives to encourage planned urbanisation - building five university townships in industrial and logistical corridors, allocating INR 5,000 crore over 5 years per for City Economic Regions, dedicated freight corridors and rare earth corridors. The Union Budget 2026 has also announced incentives for municipal bond issuance in addition to those offered under AMRUT Scheme.

These targeted and sustained initiatives have ensured a vast expansion in public services such as sanitation, waste management and water access. However, as the Economic Survey notes, they must now evolve from expansion to reliability, circularity and efficiency. This will only be possible with a streamlined governance architecture and greater fiscal autonomy for cities so that they can deliver these public goods at scale.

A Call for Pragmatic Approach: Outcome-Oriented, Growth-Focused Urban Policy

While urbanisation is primarily a State subject, the Union government must play a catalytic role by providing (i) strategic guidance, (ii) technical support including clear outcome goals and timelines, (iii) financial incentives for reforms and (iv) fundamental reforms to the administration including service rules that supports urbanisation and economic growth at local level.

So far, most interventions by the Union government have been input-based. However, input-focused strategy of the past has led to costs and delays, distracting away from outcomes.

[14] https://www.pib.gov.in/PressReleasePage.aspx?PRID=2227986&reg=3&lang=1
[15] https://www.indiabudget.gov.in/doc/bh1.pdf

Instead, we propose that the implementation strategy and project flow under Urban Challenge Fund and other Union government initiatives should be based on outcomes which are practical and palpable, based on the aforementioned five citizen-centric areas of welfare.

All projects must be evaluated only on the following two parameters: (i) How closely aligned it is with the five welfare domains and (ii) Going forward, how cities perform in achieving these five parameters. Our approach is similar to that of 16th Finance Commission which goes beyond simple population and area-based criteria to incorporate a significant performance component for both States and ULBs.[16] Similarly, even under Union government's Scheme for Special Assistance to States for Capital Expenditure that has been operational since 2020, over 50 percent of the total financial assistance to states has been linked to their performance and track record in undertaking reforms in specific focus areas including land-related reforms in urban areas and urban planning reforms[17].

As per the same principle, the disbursement of funds under Union schemes over the next five years must be linked to needs on the ground as captured in a formula that gives appropriate weight for newly urban and rapidly urbanising areas. However, at the end of five years, a new performance framework must emerge wherein subsequent disbursement of funds must be linked to the attainment of five outcomes listed above.

Other Elements of the Pragmatic Framework

- Formula for devolution of funds for urbanisation must factor in the following three variable:
    - Current level of built-up volume
    - Growth rate of built-up volume by area
    - Level of built-up volume per capita

  These three variables can be estimated using satellite data, as detailed in Part I of this paper

[16] The 16th Finance Commission recommends that the performance component of the grants be disbursed on the condition that ULB raises 5 percent additional own sources of revenue (OSR) every year or has a compounded growth of 5 percent over OSR of 2025-26. The conditions on state government have also been laid out resting upon having a duly constituted body, publicly available audited accounts, timely formation of State Finance Commission and tabling of Action Taken Reports as well as state transfers from its own resources to local bodies.

[17] https://www.pib.gov.in/PressReleasePage.aspx?PRID=2212546&reg=3&lang=1

- *Incentive compatibility for officers posted in urbanisation-facing departments:* Officers posted in departments and municipal bodies responsible for delivering the outcomes linked to five citizen-centric areas of welfare must be evaluated based on the achievement of those goals. Incentive structure based on achievement of these five outcomes will introduce skin in the game for officers and bring an additional push to achievement of these citizen centric outcomes.
- *Administrative support for cities to ensure more widespread distribution of funds*: There must be time-bound clearance of each project proposal at the State and Union level. Further, a bid-preparation fee must be provided, and technical support must be made available to help cities prepare viable projects. Finally, there should be different norms for earmarking funds for states with small populations, hilly states and states prone to natural disasters under all Union government schemes.
- *Creating an Outcome Fund*: As explained in Part III of the paper, an Outcome Fund must be created at the level of the Union government to crowd in private capital and make repayment viable for cities. Like impact bonds, payment under such an outcome fund would be linked to outcomes generated.

State governments, in turn, must perform some critical roles for this overall transformation to be successful. These include (i) Notify new urban areas, (ii) Empower Urban Local Bodies (ULBs), (iii) Transfer the 18 functions under the 12th Schedule of the Constitution, and (iv) Ensure timely and adequate fiscal transfers.

I. CLASSIFICATION & DELINEATION OF "URBAN" AND "RURAL"

The issue of labelling settlements as "urban" and "rural" has important policy implications in India since the label determines the local governance structure (panchayat or urban local body), allocation of resources under government schemes and creating public infrastructure. For example, the RBI defines "rural" and "urban" based on a simple population arithmetic by relying on census data. Accordingly, it divides all settlements of India in 6 Tiers that govern the approvals required for opening of new branches by Regional Rural Banks[18].

Misclassification of "urban" and "rural" has serious consequences: it undermines targeted policy formulation, misallocates public resources, and masks the real scale of India's urban transition. Policymakers often work on the faulty assumption that "rural" is a proxy for "poor" and accordingly spend greater resources on provisioning of public goods in areas defined as "rural".[19]

How is "Urban" Defined in India

In India, state governments have the power to notify an area as "urban" by a public notification. They typically rely on various demographic metrics such as population, density, revenue generated from the area and share of non-agricultural activities[20]. Once notified as "urban", an urban local government (such as town panchayat, municipality, municipal corporation, cantonment board) is created to govern the area. All habitations which have an urban local government are called "statutory towns".[21] However, the definition is not uniform across state governments and there is a lot of subjectivity involved. As a result, state bureaucracies have a lot of leeway in deciding what is "urban" with the result that de-facto urban areas continue to be labelled as "rural".[22]

This subjectivity in labelling of statutory towns across states is highlighted by Rumi Aijaz in his 2017 paper *Measuring Urbanisation in India*[23]. He shows the wide variation in the lowest

[18] "Tier 1 comprises metropolitan and urban centres; Tiers 2, 3, and 4 comprise semi urban centres and Tiers 5 and 6 comprise rural centres." See: https://rbi.org.in/Scripts/NotificationUser.aspx?Id=9817&Mode=0#an4.
[19] https://eacpm.gov.in/wp-content/uploads/2024/02/Politics-in-Action-EAC-PM-Working-Paper.pdf
[20] https://www.orfonline.org/research/measuring-urbanisation-india#_ednref3
[21] Ibid
[22] https://secforuts.mha.gov.in/74th-amendment-and-municipalities-in-india/#:~:text=Nagar%20Panchayat:%20A%20Nagar%20Panchayat,Industrial%20Townships%20by%20public%20notice.
[23] https://www.orfonline.org/research/measuring-urbanisation-india#_ednref3

population of a statutory town across Indian states. In Tamil Nadu it is 2089 (Courtalam), Karnataka 2241 (Kudremukh), Punjab 2744 (Sangat), Haryana 7619 (Ateli), Gujarat (14554), Kerala 20510 (Guruvayoor) and Andhra Pradesh 30,721 (Pedana).

Meanwhile, the Union government has a separate definition of what is "urban" given by the Ministry of Home Affairs (Office of Registrar General and Census Commissioner of India). This is the definition used to identify India's urbanisation levels in the decadal census that is conducted. As per their definition, all statutory towns notified by state governments are "urban". Apart from this, any settlement which meets the following three cumulative criteria is classified as "urban:[24]

1. Has a population above 5000
2. 75 percent of employed male population is in non-agricultural activities
3. Has a density of 400 persons/square kilometre

Settlements which meet these three criteria are called "census towns" even though their respective state governments may consider them as "rural". The definition of a census town has not changed since 1971[25] and the 2027 census plans to continue with the same definition[26]. As per the Census of India, the urban population of India includes citizens living in both census towns and statutory towns[27].

So, how urban is India? That depends on which definition one relies on. In its November 2024 presentation titled *A Roadmap for India's City-Systems Reforms*[28] the think-tank Janaagraha Foundation has explained this discrepancy. As per this research, 26 percent of India's population (318 million citizens) lived in statutory towns in 2011 which increased to 28 percent (343 million citizens) in 2024 because 971 new statutory towns were notified since 2011. As per Census 2011, 31 percent of India (377 million citizens) is urban. This includes citizens living in both statutory and census towns. However, if one relies on satellite data from the

[24] https://www.indiabudget.gov.in/economicsurvey/doc/eschapter/echap15.pdf
[25] *Measuring urbanisation in India*, Rumi Aijaz, ORF Issue Brief (December 2017). See: https://www.orfonline.org/research/measuring-urbanisation-india#_ednref4
[26]https://www.thehindu.com/news/national/census-2027-to-retain-2011-census-definition-of-an-urban-area/article69969030.ece
[27] Ibid
[28] https://www.janaagraha.org/resources/a-roadmap-for-indias-city-systems-reforms/

Global Human Settlements Layer, India was already 63 percent urban in 2015. This is more than double the official census estimate.[29]

In his 2017 paper, Rumi Aijaz explains the World Bank approach to measure urbanisation using an Agglomeration Index developed by Uchida Hirotsugu and Andrew Nelson based on three parameters: population density, population of a large urban centre and travel time to that large urban centre[30]. Based on this methodology, India was already 55.3 percent urban as early as 2010.

This dissonance between actual urban settlements in India and their lack of formal recognition for administrative purposes was illustrated by the Economic Survey 2026 in its analysis of Kerala using the Global Human Settlement - Degree of Urbanisation classification primarily based on GHSL's Population and Settlement Model with urban areas formed of Cities, and Towns and Semi Dense areas in turn defined on density of inhabitants per square kilometres[31]: *"Considering the creation of 34 new urban local bodies, expansion of existing municipal boundaries, and several post-2011 reclassifications, Kerala's updated statutory urbanisation level is revised at 53.81 per cent. When the spatially identified settlements are added, the estimated urbanisation increases to about 80.8 per cent, reflecting the widespread expansion of built-up and integration of economic areas beyond traditional municipal limits."*

What is beyond doubt is that the current classification which uses a combination of administrative definition and census criteria is inadequate in capturing the speed and scale of urbanisation in India. For starters, the focus on just male workforce to decide what is urban renders this metric detached from today's reality. As noted in the EAC-PM Working Paper *Assessing the National Surveys for their Representativeness*,[32] Sundaram (2013) observed that the urban population projected for 2016 was already reached by 2011. The paper also noted that the Census Post Enumeration Survey had revealed high net omission rates, especially in urban areas—further skewing the rural-urban ratio[33].

[29] https://www.indiabudget.gov.in/economicsurvey/doc/eschapter/echap15.pdf
[30] https://www.orfonline.org/research/measuring-urbanisation-india#_ednref3
[31] Ibid
[32] https://eacpm.gov.in/reports/assessing-the-national-surveys-for-its-representativeness/
[33] Ibid

Even the 16th Finance Commission has acknowledged the de-facto urbanisation of India by increasing the share of urban local bodies from 36 percent of total local government grants in the previous period to 45 percent. This translates to a disbursement of INR 3.56 lakh crore[34] from INR 1.55 lakh crore in the 15th Finance Commission, an increase of over 100 percent[35]. The share of rural local bodies has fallen from 70 percent in 14th Finance Commission (2015-2020) to 55 percent in the present period.

India needs a more dynamic approach to defining rural-urban areas which includes technological indicators like satellite imagery, nature of occupation and updated population intensity data. Use of night-time light intensity can act as a proxy for urbanisation serving as a proxy for income, connectivity and amenities like electricity, water, and presence of industries. However, we believe that in the epoch of LED lights, nightlight data is not adequate. Nightlight data suffers from blooming effects whereby the light bleeds outward due to which urban areas appear larger and smaller rural areas surrounded by urban areas are incorrectly accounted for as urban. ***Instead, using daytime satellite data to measure Built-Up Volume is a better source for mapping the state of urbanisation and the average size of urban conglomerates. The daytime satellite imagery provides the opportunity to consider physical structures in a city improving inferences.***

Further, the government needs to establish "trigger mechanisms" which automate the transition from rural to urban settlement on meeting prescribed thresholds derived through a formulaic framework so that the disincentives to shift to ULBs are bypassed. More fundamentally, the government needs to revisit the assumption of creating schemes based on the rural-urban.[36]

EAC-PM Approach to Estimate Urbanisation in India

What is the best way to recognising functionally urban settlements and revise the statutory boundaries of urban areas to include settlements with urban traits? So far, it has been easier for countries to determine the classification of rural and urban using demography, either employing size or density of population or a combination of both. Estimates suggest approximately 46

[34] https://prsindia.org/policy/report-summaries/report-of-the-16th-finance-commission-for-2026-31
[35] https://www.thehindu.com/data/16th-finance-commission-triples-grants-to-urban-local-governments/article70590306.ece
[36] https://eacpm.gov.in/wp-content/uploads/2023/03/What-is-Urban-Rural-India-1.pdf

percent of countries employed population size or density as a criterion for urban-rural classification (acting as a single classification parameter or in combination with additional parameters). On the other hand, urban characteristics like availability of infrastructure and amenities (education, health, sanitation) were only employed by about 29 percent of countries to classify urban and rural areas.[37]

In India, the use of decennial census inhibits correctly classifying urban areas and using correct policies.[38] Modern technologies have now overcome limitations created by data unavailability. Satellite imagery is now utilised in disaster management, climate, agriculture, water, forestry and numerous other sectors. For instance, in the domain of urbanisation, mapping built-up surface area, estimating built-up height and the total built-up volume is done through satellite imagery.

Reliable high resolution Daytime Satellite data being made available through Global Human Settlement Layer in five-year epochs, alongside more frequent imagery provided by Department of Space, prove to be a better approach to monitor development of urban characteristics. ***Therefore, we recommend usage of daytime satellite data to measure built-up volume as a modern source for mapping the state of urbanisation and the average size of urban conglomerates.***

Frey (2001) highlights that there mainly exist three criteria to develop an urban classification namely the ecological criteria, economic criteria and social criteria.[39] We propose to use built-up volume data and derived statistics for classification and delineation of urban and rural areas because it largely satisfies the three classification criteria.

The ecological criteria is often determined through population count and density with the underlying assumption that higher the population in an area, higher is the built-up environment. But population count and density usually remain dependent on the decennial census. There are other ways to apply the ecological criteria. An easier approach is to measure the impervious land cover defined by the concrete, asphalt and brick surfaces as well as building height which

[37] https://www.unfpa.org/sites/default/files/resource-pdf/STIC_urban_rural_delineation.pdf
[38] While the classification can be made on criteria in addition to those laid out by census, states usually remain dependant on census as their main criteria for reclassification
[39] Frey, W., "Defining the City," In Paddison, R., Handbook of Urban Studies, Sage Publishing, London, UK, 2001.

together form the built-up volume of the region. This also acts as a proxy for measuring the environmental impact of humans. With availability of satellite data, measuring built-up volume is a cost-efficient way to gauge urbanisation than relying solely on population data, actual estimates of which remain dependent on decadal census.

The economic criteria primarily assess the source of livelihood within the region. Dependence on primary economic activities is associated with rural settings. This too can be analysed through built-up volume statistics where lower built-up areas can indicate greater areas under cultivation and higher dependence of local population on agricultural activities, leading to classification as rural.

The social criterion for classifying urban areas brings forth the importance of how urbanism becomes a way of living, different from rural life. It underscores the changed behaviours and perceptions. Since these can only be captured at a granular level through surveys, an alternative approach is to use the presence of infrastructure (as captured in built-up volume) as a good proxy to determine urban life.

EAC PM Analysis Utilising Satellite Data for Measuring Urbanisation

This paper utilises the satellite imagery data provided by Global Human Settlement Layer to analyse the district level variation of built-up volume across India.[40] Comparing the absolute levels of built-up volume in 2020 and the growth rate observed in the span of five years between 2015 and 2020, the paper captures both stock of built-up infrastructure in the district as well as the growth of physical development in the district. To provide a broader spatial and demographic context, the level of built-up volume is adjusted for area and population.

The paper covers three dimensions of physical development across districts by estimating the infrastructural endowment, the pace at which structural transformation is occurring relative to area of the district and the density of built infrastructure per capita. These three indicators integrated together in a weighted measure provide a multidimensional assessment of urbanisation and serve as an alternative beyond the primarily population density based criteria employed in the GHSL's Degree of Urbanisation utilised in Economic Survey 2025-26.

[40] Pesaresi, M., Schiavina, M., Politis, P., Freire, S., Krasnodębska, K., Uhl, J. H., … Kemper, T. (2024). Advances on the Global Human Settlement Layer by joint assessment of Earth Observation and population survey data. International Journal of Digital Earth, 17(1).

In this context, it is important to underscore that as India adopts spatial data for wider applications, globally developed standards and definitions should be carefully evaluated for their conceptual foundations and suitability to India's realities before their application in policies. Internationally developed classification systems may not account for India specific institutional and demographic requirements.

The framework developed in this paper combining infrastructure stock, growth dynamics relative to spatial extent and the per capita density of physical development, offers not only a basis to classify and delineate urban and rural areas but also alignment of policy frameworks suited to urban environments and efficient devolution of funds. However, this paper serves only as a guiding instrument highlighting applications of finer spatial data to applications in the realm of urbanisation.

The spatial analysis presented in this paper is carried out at district level. The primary motive to conduct the analysis at district level is to serve as a guiding tool for awarding development funds relative to levels of urbanisation at the district level. Similar analysis carried out at levels of census towns can also be utilised for updating the status of de facto urban areas.

Data

The built-up volume data has been acquired through the freely available Global Human Settlement Layer. This dataset operates as the core of 'Exposure Mapping Component under the Copernicus Emergency Management Service.' and is built by the European Commission Joint Research Centre (JRC)[41]. It stands as a global collaboration between European Union's Earth observation program: Copernicus Emergency Management Service, Space agencies and leading academic institutions: Group of Earth Observation (GEO), and UN-Habitat, UN Statistical Commission, World Bank, OECD, as well as National Statistical Offices for urban, population, and policy support. GHSL provides spatial data which is released in epochs of five years starting 1975 up until 2030. In particular, this paper utilises the built-up volume data released by GHSL for 2015 and 2020 as per the GHSL Built-up Volume release of 2023 (GHS-BUILT-V - R2023A) at a resolution of 100 meters.[42]

[41] https://human-settlement.emergency.copernicus.eu/about.php
[42] https://human-settlement.emergency.copernicus.eu/download.php?ds=builtV

The choice of years 2015 and 2020 over newer epochs, 2025 and 2030 data, is preference of data closer to recorded imagery to ensure empirical robustness. Later epochs of 2025 and 2030 are forward temporal modelling which at finer scales of district level can amplify minor modelling deviations. To minimise projection related uncertainty, this study utilises remotely sensed data for 2015 and 2020. Additionally, the period serves as a consistent time frame before the impact of pandemic which introduced economic shock to the trajectory of urbanisation.

The Socioeconomic High-resolution Rural-Urban Geographic Platform for India (SHRUG) provided by Development Data Lab covers data for several socioeconomic variables in India. SHRUG 2.1 release is utilised for India, state and district open-source shapefiles at the 2011 census polygon geometries with author modifications to correctly include all regions of India.[43]

District level population estimates have been estimated using the Kontur Population Dataset which is a high-resolution gridded population dataset. Kontur population dataset combines the population estimates of GHSL with Facebook High Resolution Settlement Layer as well as Microsoft Building Footprint data amongst other datasets to reduce falsely detected regions as unpopulated and introduce other improvements across mapping the population.[44]

Methodology

We utilise the global built-up volume data from GHSL at 100-meter resolution and crop it to India level forming a subset of global raster to national extent. The raster is further subdivided based on district geometries using district shapefiles from SHRUG. The district level shapefiles serve as the basis for spatial aggregation of built-up volume and population grids as well as computation of district land area for density estimates. Shapefiles have been kept consistent across estimation of parameters for both 2015 and 2020 to allow for comparability.

The total built-up volume was calculated by spatially overlaying district polygon layer on the raster grid and summing built-up volume of pixels contained within district boundaries. The district level population has been estimated using the Kontur population dataset by overlaying

[43] Asher, S., Lunt, T., Matsuura, R., & Novosad, P. (2021). Development research at high geographic resolution: an analysis of night-lights, firms, and poverty in India using the shrug open data platform. *The World Bank Economic Review, 35(4).* https://devdatalab.org/shrug_download/

[44] https://data.humdata.org/dataset/kontur-population-india

the hexagonal grid system of Kontur with district boundaries. The district areas have been estimated using the district shapefiles.

The overlapping hexagonal grid system of Kontur dataset with district boundaries were proportionally allocated based on geometric intersections. This improves estimation accuracy attributing values for only the portion lying within administrative boundaries to the district. The estimates are then utilised to construct the three district level indicators namely the Total Built-up Volume, Growth Rate of Built-Up Volume per unit Area, and Built-Up Volume per Capita.

Results of EAC-PM Analysis

Based on the above-mentioned approach, we map the built-up volume of infrastructure across districts of India across three parameters:[45]

(1) District-wise Levels of Built-up Volume
(2) District-wise Growth Rates of Built-up Volume by Area
(3) District-wise Built-Up Volume Per Capita

(1) District-wise Levels of Built-up Volume

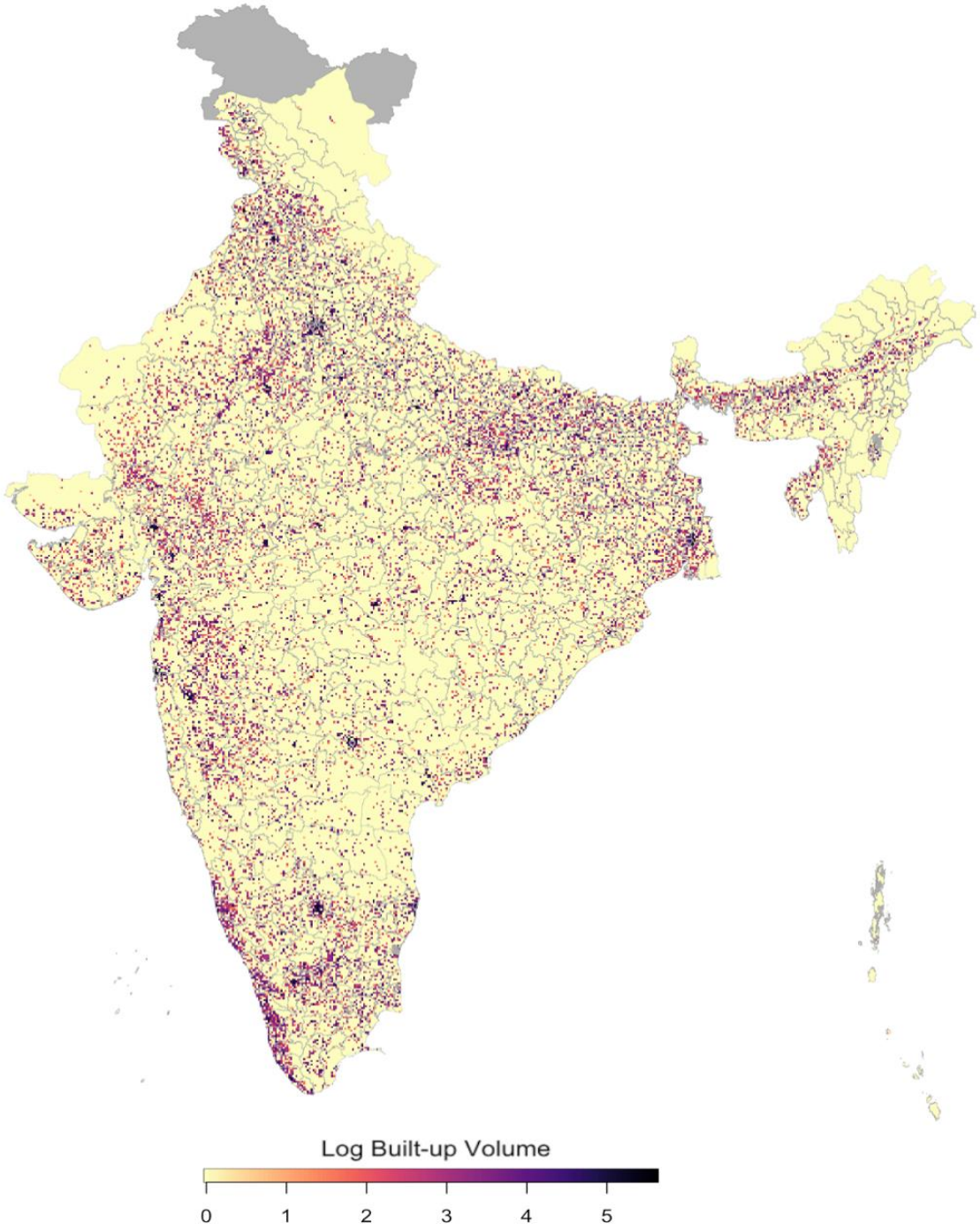
We begin by analysing the stock of built-up volume of infrastructure in a district in 2020. Figure 1 shows levels of India's district wise built-up volume (adjusted log scale) for 2020. Major metropolitan regions present pronounced levels of spatial concentration of infrastructural stock. Bangalore, Pune, Jaipur, Rangareddy, Ahmadabad assume the top spots. These districts present a case of historical urbanisation, established economic and administrative centers, large areas available for development and sustained investments.

However, infrastructural stock is extending beyond metropolitan cities to rapidly growing secondary urban hubs. Areas such as Kachchh (Gujarat), Anantapur (Andhra Pradesh) and Nalgonda (Telangana) feature in the top 100 districts in terms of levels of built-up volume. High levels of built-up volume reflects long term capital accumulation highlighting continued focus on infrastructural development. A country needs both areas with higher built-up volume to push growth provided by agglomeration economies and the quite serene countryside to

[45] Data on the three parameters can be accessed via the following link https://eacpm.gov.in/wp-content/uploads/2026/03/Final-Heatmap-12032026.pdf

maintain a balance and support the needs of the highly developed regions. It is therefore essential that built-up volume and associated statistics presented here should not be perceived with positive or negative connotation as a nation requires both industrial zones, townships as well as farmlands. We present statistics calculated using satellite data which can form the basis of classification of regions as urban and rural as well as distributing funds to support urbanisation.

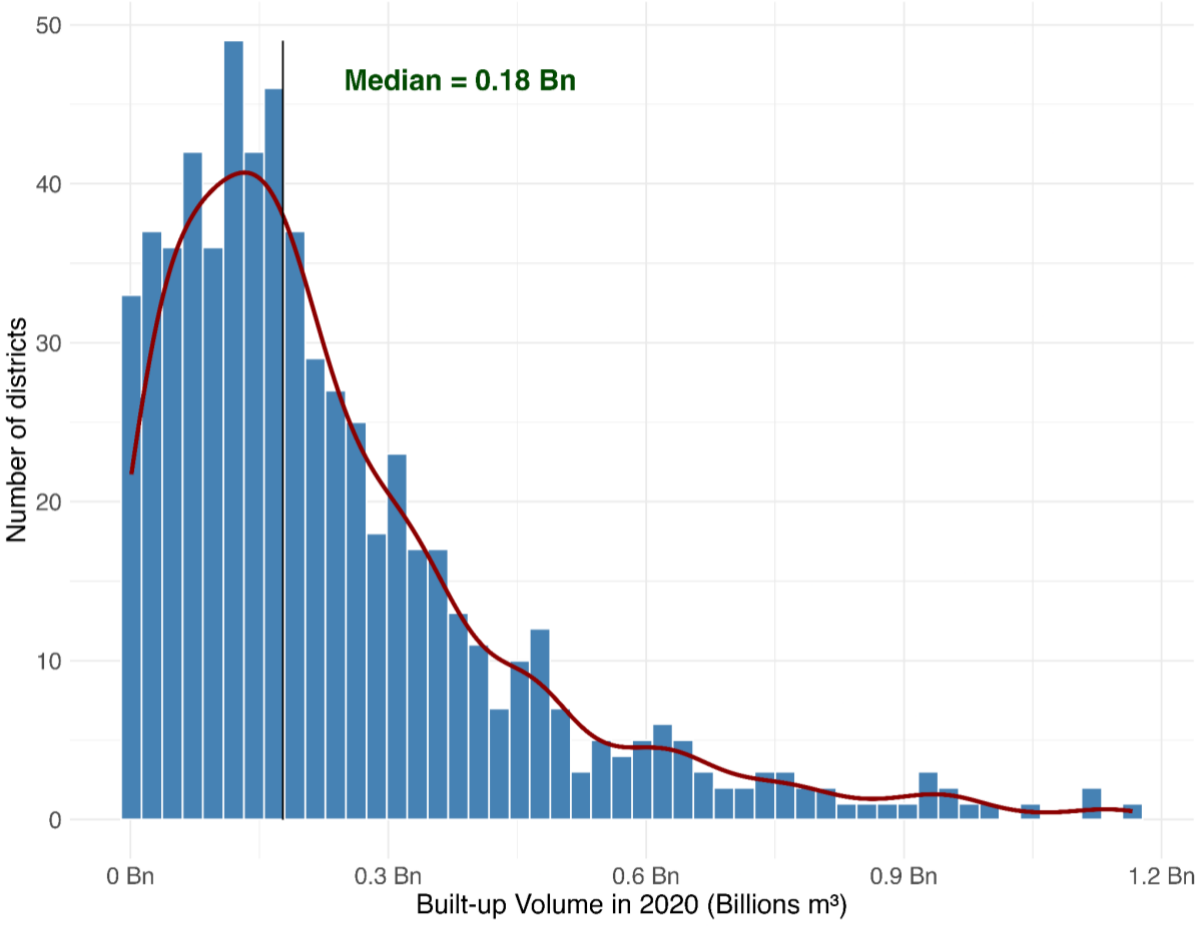
Figure 1: Built-Up Volume by Districts (Level) in 2020



Distribution of Built-up Volume Levels

Figure 2 represents Built-up Volume by District (Levels) for the year 2020 measured in billion cubic meters. The distribution is right skewed with majority districts featuring in the lower end of the distribution and a very small number of districts with high built-up volumes extending the tail to the right. The median built-up volume of 0.18 billion cubic meters (shown with a black vertical line) indicates that half of the districts have built-up volumes below this level. Most of the districts fall in the 0 - 0.5 bn m^3 range while progressively fewer districts make up the 0.5 - 0.8 m^3 and beyond ranges of built-up volume. Aligned with expectations, the figure depicts inequality amongst districts with few districts across India composed of urban centres with high built-up volumes. However, the extent of uneven urban growth across the country is striking. Top 10 districts with highest built-up volume levels in 2020 made up slightly more than 10% of built-up volumes across all of 640 districts analysed. This is evidence of the disproportionately high levels of skewness in urban story of India and calls for a more balanced regional urban growth push.

Figure 2: Built-up Volume by District (Levels, 2020)[46]

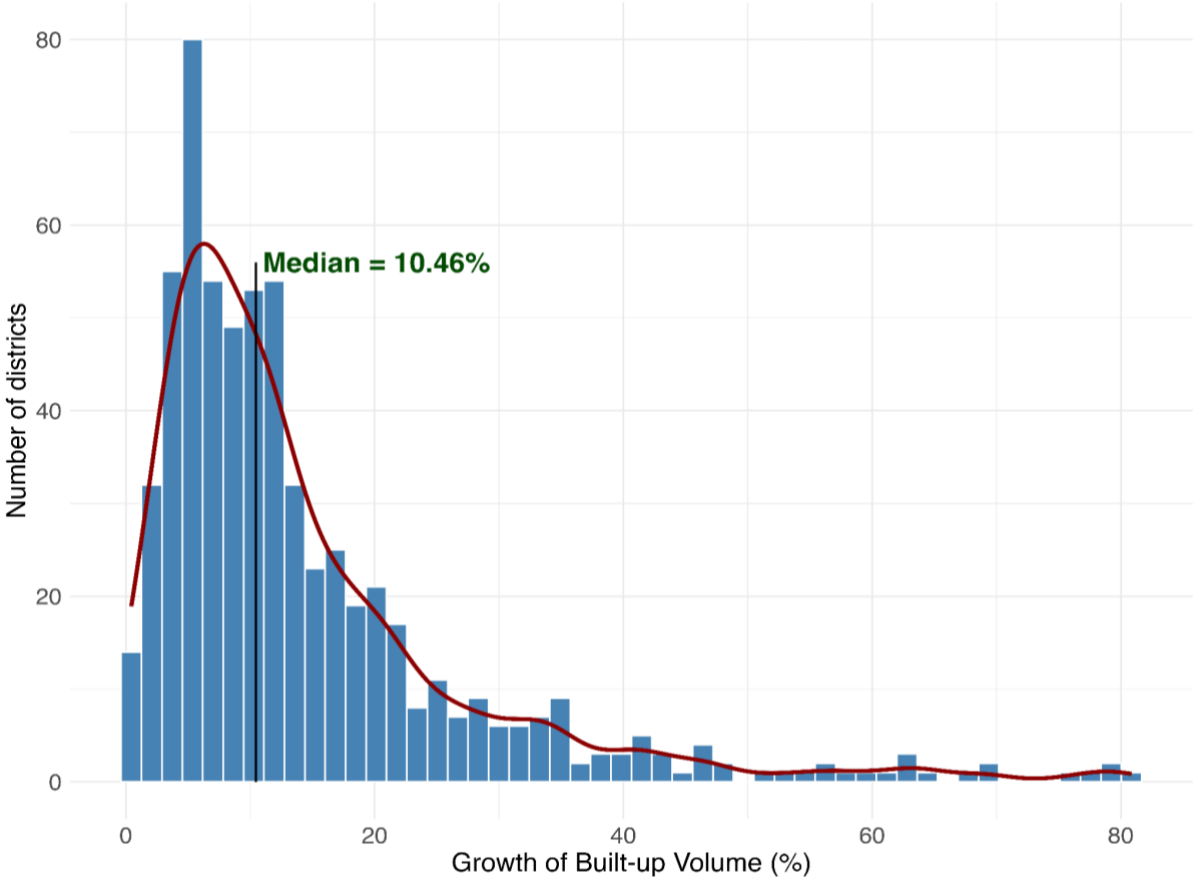


[46] Outliers have been removed

Distribution of Built-up Volume Growth Rate

Figure 3, on the other hand, presents the Growth Rate of Built-up Volume of Districts between years 2015-2020. The distribution presents a positive skewness with most districts having experienced moderate growth while only a few districts registered massive levels of expansion in terms of built-up volume. India's median district built-up volume growth rate stood at 10.46 percent (depicted with a black vertical line). Behind this growth was a highly varied experience of districts where the bulk of the districts experienced growth rates of built-up volumes lower than 15 percent while the handful of districts witnessing growth exceeding 80 percent stretched the tail to the right. Rapid expansion of built-up volumes represents growing characteristics of urbanisation in the district or an extremely small base of built-up volume whereby slight efforts to urban development result in pronounced growth rates. Thereby, the districts forming the higher than 60 percent growth spectrum are both those which are making initial efforts to infrastructural growth or those with large additions over existing broader base of built-up capital.

Figure 3: Built-up Volume by District (Growth Rate, 2015-2020)[47]



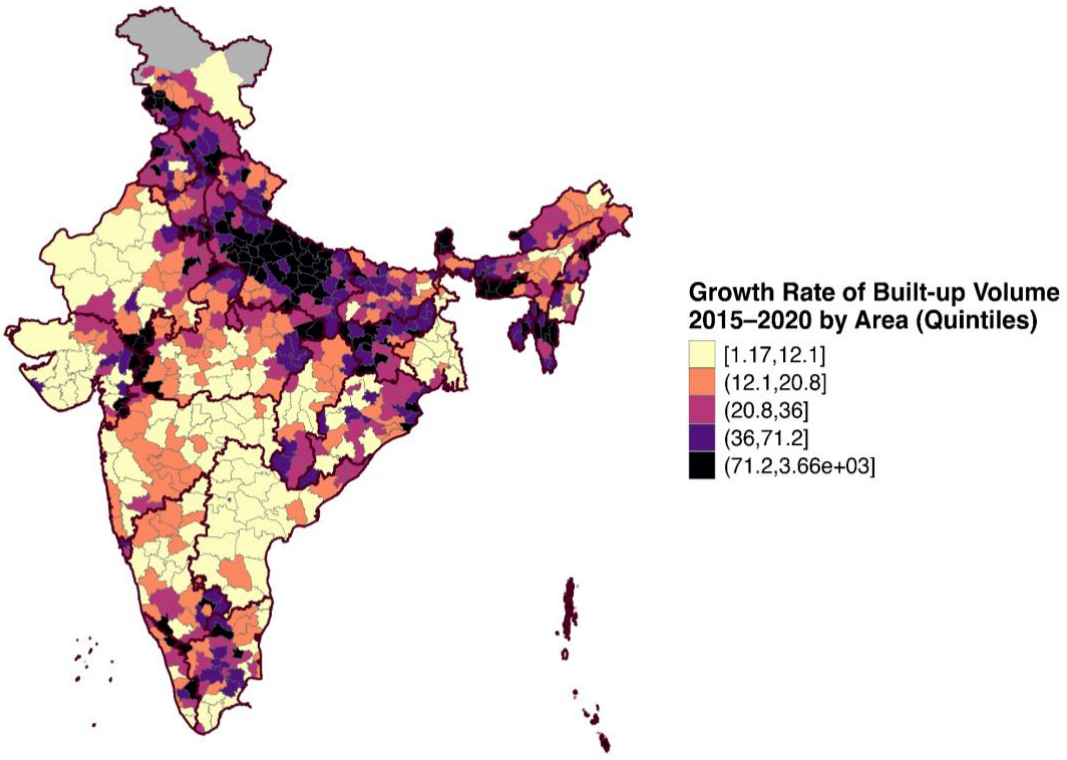
[47] Outliers have been removed

(2) District-wise Growth Rate of Built-up Volume by Area

Finer details in changes in built-up volume across India can be better visualised through Figure 4 which presents the Growth Rate in Built-up Volume through 2015 to 2020 by area of the district. This measures the pace of development while also considering the area available for development. The figure maps the Growth Rate in Built-up Volume between 2015-2020 by Area[48] dividing the districts into five quintiles as per their performance.

The district wise distribution reflects high growth in built-up volumes in the Indo-Gangetic plain and pockets of North-East while central and peninsular India largely depicts modest growth. A rapid volumetric expansion of built-up capacity is a derivative of growing population and their needs reflected in the form of peri-urban expansion, vertical intensification and infrastructure led growth. On the other hand, a lower expansion rate in the metric can result from a higher base of infrastructural stock or a predominantly agricultural or forest setting. The top districts featuring under this metric are Mahe (Puducherry), Yanam (Puducherry), New Delhi, Central Delhi, Lakshadweep, Diu, Sheohar (Bihar), Kannauj (Uttar Pradesh), South Garo Hills (Meghalaya) and Shrawasti (UP).

Figure 4: Growth Rate of Built-up Volume by Area (District-wise) between 2015-2020



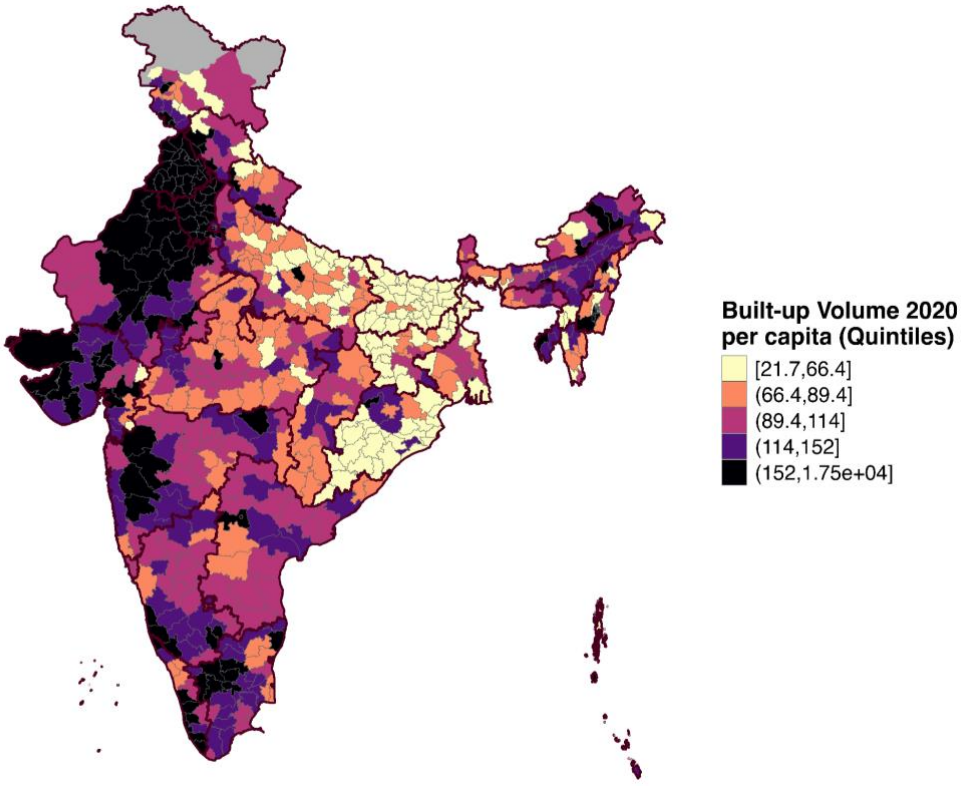
[48] Area is measured in 10000 Square Kms

(3) District-wise Built-Up Volume Per Capita

As much as change in built-up volume is a supply side phenomenon affected by state initiatives for building roads, healthcare and education infrastructure, it is equally a need based phenomenon. As the local government sees higher immigration into the region, it attempts to fulfil the consequent demand for housing, schools and basic infrastructure. Figure 5 captures this by presenting district wise quintile distribution of Built-Up Volume by Population in 2020. Here, instead of change or growth, the level of built-up volume is directly measured over population in a district since the target is to provide enough infrastructural amenities to the public instead of ever-growing Built-Up Volume.

Leaving aside the outlier J&K due to data issues, areas of Chandigarh, Punjab, Daman and Diu, Haryana and NCT of Delhi present themselves as areas with high built-up volume per capita. Regions leading in other statistics fall behind when accounting for population, Bihar being a prominent case in this aspect. The top districts under this metric are New Delhi, Daman, Ernakulam (Kerala), Papum Pare (Arunachal Pradesh), Kamrup Metropolitan (Assam), Imphal East (Manipur), Mansa (Punjab), Gurgaon (Haryana), Gautam Budh Nagar (UP) and Jhajjar (Haryana).

Figure 5: District-wise Distribution of Built-Up Volume by Population (2020)



A higher performance under these metrics reflects differentiated planning strategies, stages of urban development, impetus provided by the State/UT to accelerate the pace of urbanisation and support provided by the Union government to the state's initiatives. Of the above variables, a formulaic combination can be devised to reward districts with higher requirements and efforts towards urbanisation. Table 1 provides a sample formula which can be further studied and modified to arrive at correct weightage.

Table 1: Formulaic Design for Providing Funds Rewarding Urbanisation

S. No.	Variable Name	Weightage
1	Built-Up Volume	1/3
2	Growth in Built-Up Volume by Area	1/3
3	Built-Up Volume by Population	1/3

We utilise the three variables covered in this paper on different parameters related to Built-up Volume in the region. Going beyond the standard population intensity or an application of simple land cover measures, we utilise three areas of development core to urbanism. The levels of built-up volume reflects the extent of total infrastructural presence in the district, the growth of built-up volume by area enables tracking pace of infrastructure led development while built-up volume per capita provides an insight into the demographic pressure on the built environment giving an assessment of whether the population is being provided with adequate built-up capacity. The three indicators together help account for the base of infrastructural presence in an area, the pace of expansion of the built environment given area and the requirements of population for built-up capital.

The formula we propose is simply one suggestion to base funds for urbanisation on an objective criteria to create a weighted index utilising updated markers of urbanisation. Our larger point is that population alone cannot be a basis for allocation of resources given the importance of settlement patterns that already exist and their rate of growth. The key proposition is to anchor devolution of funds for urbanisation on a formulaic method utilising metrics that reflect structural characteristics of urban areas and their growth derived through latest spatial imagery.

This paper serves as a framework for utilising satellite data for classification and delineation of urban and rural areas, actual statistics can be computed for each state at sub-district level to assist in such classification. The GHSL Built-up Volume data provides an empirical foundation for demonstrating how satellite data can be utilised to measure Urbanisation. Going forward, updated data from the Department of Space at annual frequency should be utilised to measure, classify and delineate urban areas. Continued dependence on the existing administrative classification system characterised by delayed delineation to urban status keeps fast transforming and developing areas beset with misaligned government schemes and programs.

II. GOVERNANCE

Urban development is a State subject under the Constitution of India[49] and as per the 12th Schedule of the Constitution, urban planning was devolved to Urban Local Bodies provided that the State government has transferred those functions[50]. However, Union government provides assistance for urbanisation through schemes, financial support and technical assistance[51]. As a result, there is a vast universe of ministries, departments and agencies at the union, state and local level who have jurisdiction (often overlapping) on various aspects of urbanisation and provisioning of public goods.

Therefore, a key reason for the underperformance of India's cities is the fragmented governance architecture that is responsible for delivering public goods and amenities. To quote a 2021 Niti Aayog report on urban planning[52], *"Issues like lack of availability of serviced land, traffic congestion, pressure on basic infrastructure, extreme air pollution, urban flooding, water scarcity and droughts are not merely a reflection of infrastructural shortcomings in the cities.* ***These issues indicate a deep and substantial lack of adequate urban planning and governance frameworks****"* [emphasis supplied]

The issue of fragmented governance is compounded by the fact that we underestimate the level of urbanisation in India. As a result, large parts of the country which are de facto urban, continue to be governed by rural local bodies with limited capacity and powers[53]. By way of illustration, Gurgaon got a municipal corporation only in 2008[54]. The outdated definition of "urban" & "rural" means that the de-facto urbanisation in India is more than determined using the census. Yet, politicians and policymakers have not given these newly urban and peri-urban areas the attention they deserve.

A 2021 Report by Niti Aayog[55] on urban planning capacity in India noted as follows, *"Of the 7933 towns that are accounted as urban, almost half have a status of census towns and they continue to be governed as rural entities. With business as usual, the country may become a*

[49] https://www.pib.gov.in/Pressreleaseshare.aspx?PRID=1849948&reg=3&lang=2, https://www.tandfonline.com/doi/full/10.1080/07352166.2016.1271614#abstract
[50] https://www.pib.gov.in/PressReleasePage.aspx?PRID=1983557&reg=3&lang=2
[51] Ibid
[52] https://www.niti.gov.in/sites/default/files/2021-09/UrbanPlanningCapacity-in-India-16092021.pdf
[53] https://eacpm.gov.in/wp-content/uploads/2023/07/15-What-is-Urban-Rural-India.pdf
[54]https://indianexpress.com/article/cities/delhi/2-years-on-gurgaon-municipal-body-yet-to-fulfil-promises/
[55] https://www.niti.gov.in/sites/default/files/2021-09/UrbanPlanningCapacity-in-India-16092021.pdf

haven for unplanned urbanization." The same report also noted that 65 percent of these urban settlements did not have a Master Plan, which is the foundation for planned urbanisation. Since states ultimately have the power to label settlements as "urban", in May 2016 the Union government had urged the states to update the status of 3,784 Census Towns into statutory ULBs to support urban development.[56]

The problem of reclassification is accentuated because there are disincentives for rural to urban transition. Rural areas are benefitted from various welfare schemes by the central and state governments (such as NREGA) on the underlying assumption that the rural economies are characterised by low skilled human resource and capital base, are inherently poorer and need support[57]. The fear of losing access to these rural development programmes creates resistance to becoming "urban", a phenomenon that was flagged in a July 2019 paper in World Development, titled *Why India's Urbanization is Hidden: Observation from "Rural" Bihar*. The author Robbin Jan van Duijne, based on a study of urbanisation in Samastipur (Bihar), notes as follows:

"The panchayats' mukhiyas want to hold on to the receding rurality of their villages, even when urban growth has been substantial. Their refusal to become urban parts of expanding cities mainly stems from concerns for what will happen to the village's remaining agrarian populations. They express fears of losing access to rural development programmes, and displacement and loss of traditional agrarian livelihoods for the marginalized populations of the panchayat."[58]

In a similar vein, Rumi Aijaz notes in his 2017 paper[59]:
"If a settlement is declared "urban", it is subjected to application of rules and regulations, building byelaws, development controls, and taxation, in order to ensure planned growth and development. For this reason, state governments generally avoid converting villages into towns as they feel that application of urban laws will make villagers unhappy, and the political leadership at the state/local level would become unpopular among the rural electorate."

[56] https://www.pib.gov.in/newsite/PrintRelease.aspx?relid=145405&reg=3&lang=2
[57] Supra Note 53
[58] van Duijne, R.J. (2019) 'Why India's urbanization is hidden: Observations from "Rural" Bihar', *World Development*, 123, p. 104610. doi:10.1016/j.worlddev.2019.104610. https://www.sciencedirect.com/science/article/abs/pii/S0305750X1930186X
[59] https://www.orfonline.org/public/uploads/posts/pdf/20230530165349.pdf

The 74th Constitutional Amendment Act was introduced in 1992 to codify the role of ULBs as units of decentralised local self-governance and are responsible for delivering civic services at the first mile. While ULBs deal with basic urban services, they don't have responsibility to bring in investments, nor wherewithal to provide supplemental infrastructure for local developments. Often such public goods are delivered by line ministries of state governments, development agencies and parastatal entities over which ULB has no oversight and control.

ULBs may be one of three types depending on the size of population, area they govern, autonomy and scope of powers: Municipal Corporations, Municipalities and Notified Area Councils/Town Panchayats. The Municipal Corporation is headed by the Mayor and the Municipality/Town Panchayat by the Chairman.

Sophistication of ULB Needed for an Urban Settlement

Municipal corporations typically have a wider range of responsibilities and a larger budget compared to municipalities and town panchayats, as they serve larger urban areas with more complex needs. They are constituted in areas with a population over 100,000. Municipalities are constituted for areas between 50,000 and 100,000 while town panchayats are constituted for areas transitioning from rural to urban and with a population below 50,000. These numbers vary from state to state.

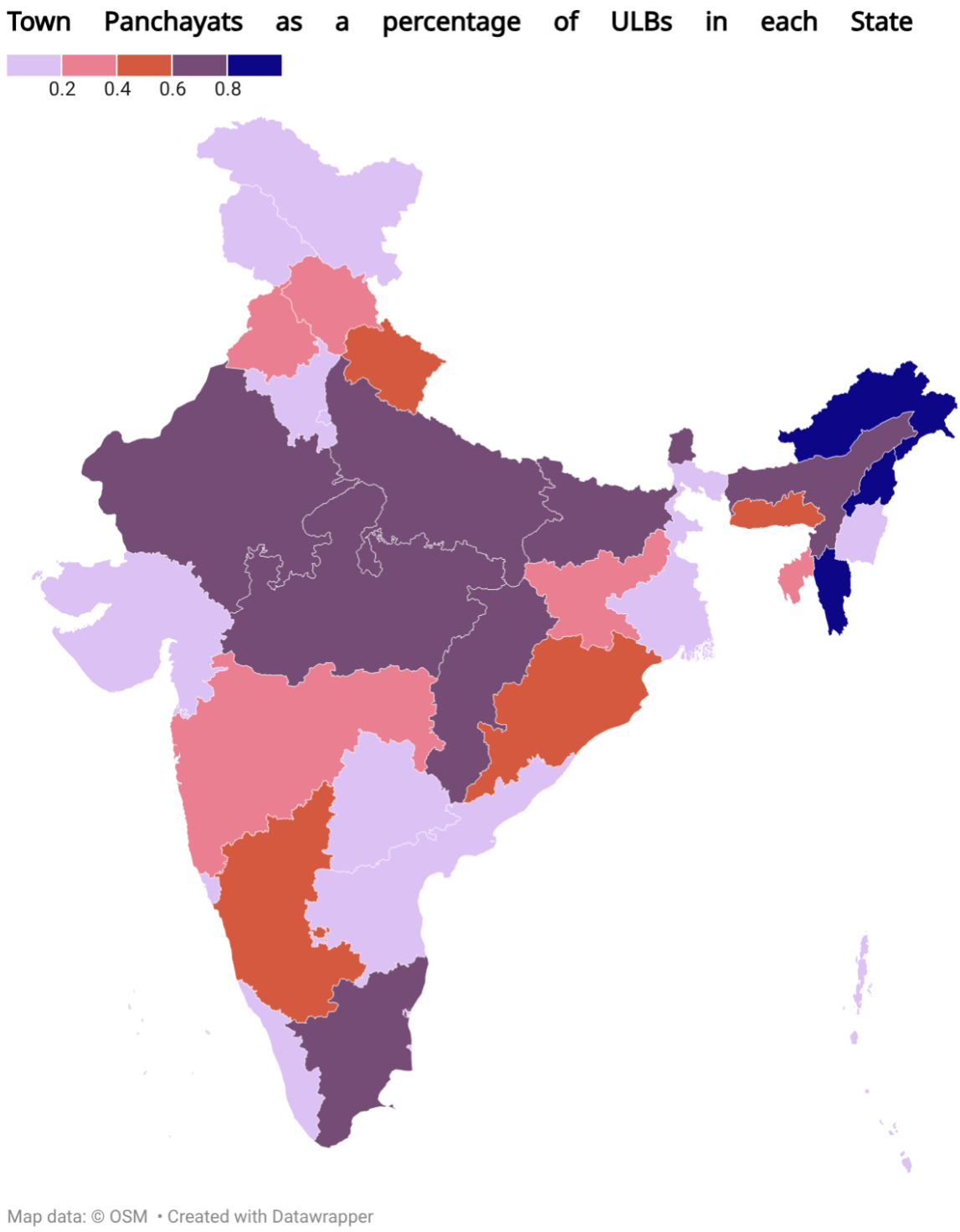
India has around 5200 ULBs in cities of which approximately 50 percent are Town Panchayats and 41 percent are Municipalities while Municipal Corporations form only 6.4 percent of ULBs (See Figure 6 below). We believe that the percentage of town panchayats in total ULBs of states such as Karnataka (54 percent), UP (70 percent) and MP (71 percent) are too high.[60] The preponderance of Town Panchayats in the ULB network of India inhibits the development of critical infrastructure in these rapidly urbanising areas that are better served by Municipal Corporations who are better equipped to manage the physical transformation of these settlements.

[60] The calculations leave aside planning authorities and focus is laid on the 4 statutory ULB categories- Municipal Corporations, Municipalities, Town Panchayats and Cantonment Boards; Data retrieved from https://pmay-urban.gov.in/uploads/List-of-ULB.pdf

The rapid growth witnessed by Indian cities in the last decade demands an update in their governance architecture to plan and prepare for challenges of modern urban regions. Consider for example IQAir's 2024 World Air Quality Report which reported that 13 of the top 20 most polluted cities in the world were in India[61]. What is noteworthy is the name of these Indian cities - Byrnihat (Meghalaya), Delhi, Mullanpur (Punjab), Faridabad, Loni (Uttar Pradesh), Gurugram, Ganganagar (Rajasthan), Greater Noida, Bhiwadi (Rajasthan), Muzaffarnagar Uttar Pradesh), Hanumangarh (Rajasthan) and Noida. In 2023, the most polluted city in the world as per this report was Begusarai in Bihar. A strategic approach towards recognising urbanising areas and empowering them with appropriate policy tools attuned to needs of the urban dwellers can avoid such adverse outcomes.

[61]https://timesofindia.indiatimes.com/india/with-13-of-20-most-polluted-cities-india-ranks-5th-globally/articleshow/118909491.cms

Figure 6: Town Panchayats as a percentage of ULBs in each State



Our first recommendation on governance is that a roadmap based on the latest population and built-up surface area data must be prepared for creating ULBs in de-facto urban areas. Further, advanced town panchayats and municipalities must be converted into municipal corporations to better serve areas experiencing in-bound migration and agglomeration effects due to higher employment opportunities.

Administrative Reforms to Promote Urbanisation

Mayors in Indian cities are largely ceremonial, with limited powers[62]. Short tenures and term limits on mayors make them extractive institutions[63]. Decision-making typically rests with bureaucratic administrators (municipal commissioners and executive officers), leading to division of responsibilities[64]. However, the situation is aggravated further because even the bureaucratic administrators face multiple transfers in their tenure of service. This further cements the extractive nature of governance and administration. To fix this, a minimum two-year tenure period was codified in the 2014 amendment to the IAS (Cadre) Rules of 1954 with a requirement to review any early transfers made by the Civil Services Board (CSB) of the state.[65] However, the tenures of bureaucrats remain much lower[66].

Shorter tenures build a system of detachment for the bureaucrat and leaves them indifferent and less invested for the development of the district. Moreover, lack of any performance incentives adds to a disengaged approach towards growth of the region. Decisions for development and prosperity of a region often come with associated risks and additional accountability for the bureaucrat. With absence of any benefits linked to proactive or developmental efforts on the part of bureaucrats for the region's advancement, officers rationally prioritise compliance with formally mandated responsibilities over discretionary initiatives.

Introducing an incentive-disincentive structure by changing the salary structure to a static and variable component can greatly improve performance and provide an impetus to India's growth. The variable component should determine the pace of promotions. This variable component should be linked to measurable outcomes achieved. Such outcomes are envisaged to be set up-front as targets to be achieved by the bureaucrat for the forthcoming year. Based on five citizen-centric areas of welfare, namely residential life, transportation, public safety, greening and public health[67], they will assist in enhancing the pace of growth. The five broad

[62]https://www.orfonline.org/research/strengthening-municipal-leadership-in-india-the-potential-of-directly-elected-mayors-with-executive-powers
[63]https://economictimes.indiatimes.com/news/politics-and-nation/should-bengaluru-get-a-directly-elected-mayor-with-a-five-year-term-and-more-powers/articleshow/60878658.cms?from=mdr
[64] https://www.niti.gov.in/sites/default/files/2019-01/report-ULB_0.pdf
[65] https://dopt.gov.in/sites/default/files/11033_1_A_2014-AIS-II-28012014.pdf
[66]https://timesofindia.indiatimes.com/city/hyderabad/frequent-ias-transfers-disrupt-administrative-efficiency-in-telangana/articleshow/115577092.cms
[67] Ang YY. China's Gilded Age: The Paradox of Economic Boom and Vast Corruption. Cambridge University Press; 2020.

areas are supposed to have measurable indicators suitable to local priorities and needs. A sample list of measurable indicators is listed in Table 2.

Table 2: Areas of Welfare and Measurable Indicators for Growth of Cities

S.No.	Areas of Welfare	Measurable Indicators
1	Residential Life	Upgradation of drainage (percentage of households with access to underground drainage), sewage (percentage of sewage treated before disposal) and waste management systems (percentage of solid waste collected and scientifically processed)
		Reduce Mixed Use Dwelling (percentage of commercial spaces also used for residential purpose)
		Match Number of Houses to Households (Housing deficit/surplus ratio- Number of households/ Number of houses)
		Enhancing Municipal Cleanliness (Swachh Survekshan ranking)
		Improving availability of ● Public spaces (percentage of households within 500m of a park/playground, Schools, Hospitals), ● Social Institutions (Proximity to Theatres, Restaurants, Café, Sports Clubs, Gyms) and ● Commercial spaces (percentage of households within 500m to 1 km of a retail grocery store / supermarket/ pharmacy/shopping complex)
2	Transportation	Reduction in average commute time and ease of logistics through identification and removal of bottlenecks on roads
		Connectivity to last mile via metro system
		Improving Walkability (percentage of streets with usable sidewalks on both sides)

3	Public Safety	Crime rate (per 100,000 population, by category)
		Ratio of Police Officers to Population/Area
		Traffic accident fatalities arising from rules violations (per 100,000)
		Violence against women/children incidence (reported cases per 100,000)
		Fire safety compliance rate (percentage of buildings with certification)
4	Greening	Urban Green Cover (percentage of land with tree cover)
		Rainwater harvesting sites per sq. km.
		Improving AQI (Number of days AQI remained in good 0-50 category)
		Solid waste recycling rate (percentage of waste diverted from landfill)
		Number of community gardens/urban farms (per 100k residents)
5	Public Health	Neonatal Mortality Rate
		Doctors/Nurses per 1000 population
		Average travel time to nearest hospital
		Reduction in incidence rate of reported seasonal diseases (per 10,000 population)
		Share of households receiving potable drinking water
		Meeting NQAS standards for quality of hospitals
The larger goal of growth of the region will be assisted by the above areas of development. However, growth itself needs to be also measured through indicators like Growth of District GDP, Reduction in Unemployment and Investments into the region.		

A differentiated approach should be followed calibrating these indicators to local realities, challenges. ULBs must update indicators as saturation levels are achieved and the district develops newer priorities. But the larger goal of these metrics will remain growth and development of the region for which the three indicators- Growth of District GDP, Reduction in Unemployment and Investments will remain unchanged and continue to be tracked across all cities.

Additionally, in the absence of a definitive period to show improvement in the cities' development, the performance indicators will have little value. To achieve indicator targets bureaucrats will require introducing newer policies and placing process changes to bring on ground impact. However, the change will take time, and improvements will come with a lag. Therefore, the fixed tenures should be honoured, and transfers should not be made unless supported by strong reasons. The tenures should ideally be no less than 3 years and annual performance in achieving set targets as well as cumulative performance of the bureaucrat over 3 years for the district's development should be reviewed. Recommendations for future promotions should be made on achieving such measurable targets. This should also be accompanied with filling of vacant posts in civil services. An understaffed government cannot provide adequate service to the public.

Thus, our second recommendation is to fix a minimum tenure of three years for bureaucrats to limit unnecessary transfers and introduce an incentive-disincentive structure through static pay and a variable component. The variable component will determine promotions of the bureaucrat and will be directly linked to achievement of prior set targets aimed at growth of cities. Additionally, filling up of vacant posts can provide the required hands on deck and ensure proper service delivery adding an impetus to development.

This will, however, only solve the bureaucratic performance but fall short of bringing in any impact to decentralisation at the ULB level. While mayors only assume ceremonial positions, elections to ULBs hold importance for appropriate decentralisation. However, as per a November 2024 CAG Report, elections were delayed in over 60 percent of ULBs across India[68]. Since ULBs are envisaged as a self-governing third tier of government, delayed

[68] https://cag.gov.in/uploads/StudyReports/SR-Compendium-067346fdd7000e9-76046538.pdf

elections and running these bodies only through bureaucratic administrators violates the principle of decentralisation.

Therefore, our third recommendation on governance is to ensure that the creation and appropriate functioning of ULBs is streamlined to democratise urbanisation. Access to centrally administered schemes on urban development must be conditional upon ULB reforms.

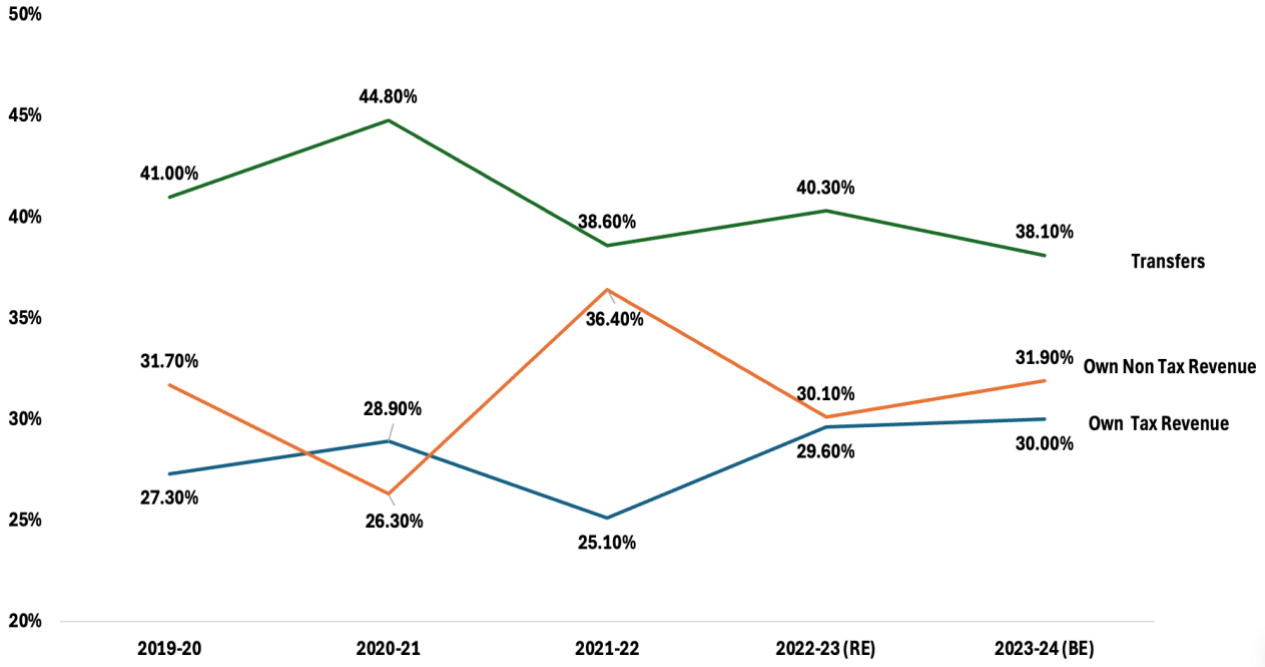
Table 3: Summary of Recommendations on Governance

Area	Recommendation
Urban Classification	Use built-up area and updated population data to reclassify settlements; upgrade high-growth areas to municipal corporations.
ULB Empowerment	Ensure timely ULB elections; link access to central urban schemes with decentralisation reforms.
Bureaucratic Performance	Fix minimum 3-year tenures; introduce performance-linked promotions via measurable indicators.

III. FINANCING

ULBs receive funds from the Government of India (GoI) and the respective State Government in the form of Grants. The GoI Grants include grants assigned under the recommendations of the Finance Commission. Grants from the State government are received through devolution of proceeds of the total tax revenue based on the recommendations of the State Finance Commission. The third source of funding is own revenue mobilised by the ULBs such as taxes, rent, fees, issue of licenses[69]. The major sources of revenue receipts and shares are depicted in Figure 7:

Figure 7: Revenue Receipts of Municipal Corporations



Source: RBI Report on Municipal Finance 2024[70]

It is well established that finances of urban local bodies are inadequate to meet the growing demands placed upon the municipalities as part of the 12th schedule of the Constitution. Many of these functions hold critical importance for general functioning and development of the urban areas. The key responsibilities include development and maintenance of roads and bridges, ensuring water supply for both domestic, and industrial and commercial purposes,

[69]https://cag.gov.in/uploads/old_reports/local_bodies/Issued_State_Govt/Orissa/2005_2006/ulb_chap_1.pdf; https://cag.gov.in/webroot/uploads/download_audit_report/2016/Bihar_Performance_Audit_LB_PRI_Report_1_2016.pdf

[70] https://rbi.org.in/Scripts/AnnualPublications.aspx?head=Report+on+Municipal+Finances

provision of adequate public health, sanitation systems along with solid waste management services, emergency services like fire departments and efforts for urban poverty alleviation.[71]

Provision of these services entails a significant burden on municipal finances which operate on limited budgets owing to restrained resource collection powers and largely depend on transfers. This underscores the need for financial empowerment of urban local bodies tapping all available resource generation avenues and ensuring taxation powers as well as committed transfers from centre and state commensurate to resource requirements.

Local government revenues in India, as a proportion of GDP, are among the lowest in comparison to peer economies[72]. Therefore, development at grass-root level will remain hindered without reforms in resource allocation to ULBs. This is reflective in the availability of basic urban infrastructure in India which is lagging behind the levels achieved in the OECD and other BRICS nations.[73] A major reason for the inadequate provisioning of public goods is the insufficient revenues of urban local bodies which is beyond their control.

Conventional sources of raising revenue continue to be the tax collection powers devolved by State Government, user charges and fees. Within these, novel ideas of raising revenues which are unutilised are mentioned subsequently. However, apart from conventional sources of revenue generation, urban local bodies also have the option to tap the municipal bonds market as well as outcome funds.

User Charges and Fees

In terms of user fees, municipalities must explore using a cost-plus-pricing model on utility services like water, sewage and waste disposal. Availability of modern technologies to identify traffic violations through usage of red-light cameras with AI video capabilities or upgrading old CCTV cameras with Adaptive Recognition's Enforce Box[74] reduces cost of total setup

[71] https://mohua.gov.in/upload/uploadfiles/files/chap13.pdf

[72]https://www.thehindu.com/data/data-municipal-corporations-in-india-are-gasping-for-funds/article66360699.ece

[73] This is evident from the percentage of Indians using basic sanitation services in urban areas standing at 85 percent below neighbouring China at 98 percent, Sri Lanka at 96 percent. Similarly, in India only 93 percent of people use at least basic drinking water facilities, much lower than neighbouring China and Bangladesh, both at 98 percent and OECD members at 99 percent (data sourced from World Bank in December 2025. Please see: https://data.worldbank.org/indicator/SH.H2O.BASW.ZS?locations=SL.&most_recent_value_desc=false; https://data.worldbank.org/indicator/SH.STA.BASS.UR.ZS?most_recent_value_desc=true).

[74] https://adaptiverecognition.com/blog/traffic-transportation/red-light-cameras-traffic-cameras/

while allowing for raising revenues through challans and fines. Developing newer ways of raising revenues like those implemented in London as congestion charges and in Finland on basing fines (for over-speeding) on income of violators remains available.[75]

The municipalities can explore other ways of raising revenue. A lot of land remains unutilised under government ownership. A central account of vacant land across ULBs which is non-essential as well as government buildings unutilised can be created and such property should be leased out. Investing into waste recycling, solid waste management and biogas generation from organic waste can prove profitable ventures for municipalities.

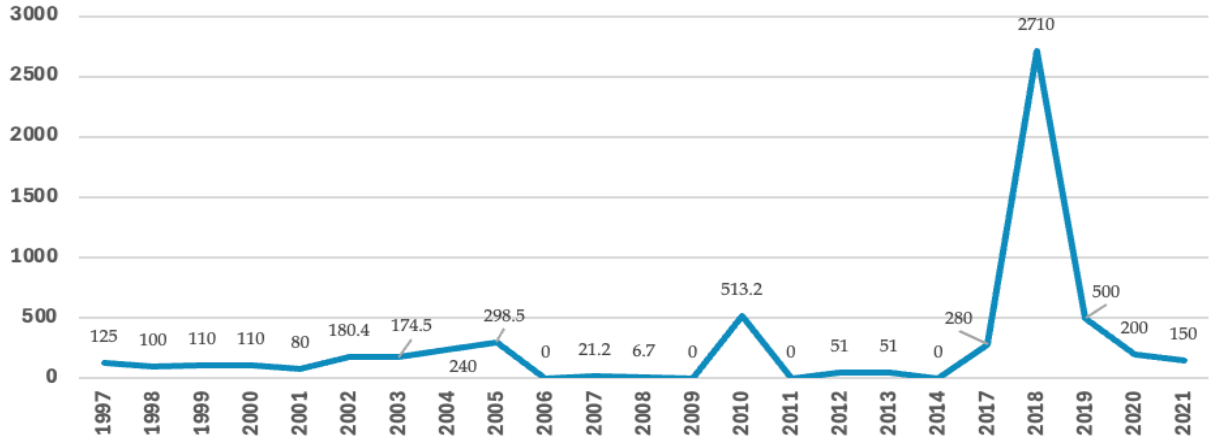
Municipal Bonds

Municipal bonds form a viable alternative to transfers from Central and State governments. These bonds are an emerging financial instrument for Indian cities, enabling them to fund critical infrastructure such as water supply systems, sewage treatment plants, drainage networks, and renewable energy projects.[76] As per RBI records, since FY2018 the total amount raised by cities in India in municipal bonds has exceeded ₹2,600 crore, a substantial increase compared to the period between FY1998-FY2005 when less than ₹1,000 crore was raised through these instruments.[77] The viability of municipal bonds is evidenced by the fact that their market has the potential to reach USD 3 billion by 2030.[78]

Figure 8 depicts the finances raised through municipal bonds between 1997 and 2021 based on the RBI Report on Municipal Finance 2022, referenced earlier. Excluding the outlier figure of the year 2018, an average of only about INR 145 crores worth of municipal bonds are issued each year.

[75]https://www.mckinsey.com/industries/public-sector/our-insights/unlocking-the-full-potential-of-city-revenues
[76]https://www.ceew.in/press-releases/indian-municipal-green-bonds-market-could-mobilise-to-usd-2.5-billion-and-boost-climate-resilient-urban-growth
[77] RBI Report on Municipal Finance 2022;
https://rbi.org.in/Scripts/AnnualPublications.aspx?head=Report+on+Municipal+Finances
[78] Supra Note 72

Figure 8: Municipal Bonds Issuances 1997-2021 (INR Cr)



Source: RBI Report on Municipal Finance 2022[79]

In a federal structure, municipal bonds provide for flexibility to local governments to attract investments and fund vital projects enhancing civic amenities while allowing them to manage their finances. In case of defaults, where supported, the state and central government can also step in acting as guarantors to furnish unserviced debt.

However, municipal bonds and other alternative sources of financing (including market borrowings) remain largely untapped. Although the centre finances about 61 percent of its deficit through market borrowing and states/UTs finance 85 percent through market debt, municipal corporations are required to maintain a balanced/surplus budget limiting several viable avenues of raising capital for development.[80]

There are several measures taken by the government to address the paltry performance of the Municipal bond market. In 2015, SEBI notified a separate framework for issue and listing of municipal bonds.[81] This garnered investor interest and laid the foundation for the municipal bond market. By 2017, SEBI had also introduced continuous disclosures by issuers further fortifying investor confidence. In 2019, RBI/SEBI permitted Foreign Portfolio Investors (FPIs) to invest in municipal bonds. The most recent policy support introduced has been through Union Budget 2026 which announced an incentive of ₹100 crore for a single municipal bond issuance of more than ₹1000 crore.

[79] https://rbi.org.in/Scripts/AnnualPublications.aspx?head=Report+on+Municipal+Finances
[80] Ibid
[81] https://www.sebi.gov.in/legal/regulations/sep-2019/securities-and-exchange-board-of-india-issue-and-listing-of-municipal-debt-securities-regulations-2015-last-amendment-on-august-03-2021-_34611.html

For municipalities to raise funds via bond markets, gaining investor interest would be of paramount significance. Deviation of municipalities from following standard accounting practices[82], and lack of optimal revenue generation keeps expenditure needs unfulfilled. Investors, looking at lack of audited accounts, remain discouraged from investing into the municipal bonds. Municipalities can introduce revenue bonds backed with accruals from infrastructural projects like highway tolls that can attract investors. However, the larger issue of transparency of financial accounts assumes primary importance.

Starting with following standard accounting practices and timely publication of audited accounts would only be the first step towards laying ground for introducing vibrancy in municipal bond markets. The municipalities would also need to show strength in raising revenues from various sources such as user fees, fines and land monetisation.

A prohibitive aspect of municipal bonds remains even after securing investor confidence through healthy financials. The initial cost of issuance for municipal bonds becomes inhibitory for many ULBs. Certain solutions in the form of State Pooled Finance Entity (SPFE) acting as a trust or a special purpose vehicle helps issue bonds for participating municipal bodies in turn lowering the issuance cost. As the debt is serviced through pooled revenue streams, the risk is hedged across all municipal bodies allaying fears of default.[83]

Outcome Funds

Outcome funds make for yet another avenue where ULBs can finance development. These funds are financial instruments designed to reward successful delivery of outcomes, with payment made by the government only upon successful delivery of urban amenities. Such results-based financing has been widely utilised in other geographies. The World Bank has disbursed US$ 22 billion globally as outcome funds.[84] Outcome funds have also prominently been utilised in Portugal, Netherlands and USA with recent applications expanding to Latin America and Sub-Saharan Africa.[85]

[82] RBI Report on Municipal Finance 2022
[83] Ibid
[84]https://documents1.worldbank.org/curated/en/230581623054776388/pdf/An-Introduction-to-Outcome-Based-Financing-GPRBA-s-Outcomes-Fund-MDTF.pdf
[85] https://golab.bsg.ox.ac.uk/documents/Outcomes_Fund_Guide_For_Web_with_logo.pdf

Outcome funds for public amenities have a strong signalling effect on the private sector about the willingness of the government to make market-rate payments for achieving pre-decided infrastructure amenities. Municipalities can explore investor interest in outcome funds which will form a low-cost source of finance and achieve developmental outcomes.

Further, the five major areas of development as highlighted earlier namely residential life, transportation, greening, public health and public safety can have associated outcome funds for achieving underlying measurable outcomes. Assessment of the bureaucrats' own performance on meeting the sub-indicators associated with outcome funds aligns the interests of both the investor and the administrator, further ensuring outcomes are met.

Quality of outcomes can be ensured through accreditation agencies like National Accreditation Board for Hospitals and Healthcare Providers (NABH) and National Board of Accreditation (NBA) in technical education and funds can be subsequently disbursed.

Since most utility providers in areas such as mobility, amenities and solid waste management tend to become natural monopolies, it is also important for cities in India to develop a body akin to the Port Authority with trusted city-level representatives who can negotiate with the utility provider to prevent escalation of costs or deterioration of services (bad monopolies).

Although resource allocation reforms remain necessary for ULBs, they may form a long-term objective due to complex institutional frameworks. However, introducing changes to user charges and fines structures can give budgetary assistance to municipalities. Further, reforming accounting practices and setting up of SPFEs by state governments for debt servicing can make municipal bonds a viable option for resource generation.

Table 4: Summary of Recommendations on Financing

Area	Recommendation
Own Revenue	Rationalise user fees; leverage fines, leases, and waste-to-energy investments.
Municipal Bonds	Standardise financial reporting; pool issuance through SPFEs; issue revenue bonds.
Outcome Funds	Pilot performance-linked funds in key urban sectors; tie bureaucratic incentives to outcomes.
Utility Regulation	Create city-level regulatory authorities to monitor service delivery.
Institutional Reform	Strengthen ULBs' financial autonomy and share in intergovernmental transfers.

IV. LAND

Land reforms are at the heart of urban planning and there has to be a whole-of-government approach to bringing greater flexibility in land transactions - its acquisition, conversion and use. The importance of land reforms to economic growth of a region is best illustrated by a February 2025 EAC-PM paper titled *The Great Convergence: A Case Study of Uttarakhand and Himachal Pradesh (2000 to 2020)*[86]. To quote the authors:

"The only fundamental difference between the industrial policies of the two states was in their land policies, while all others were identical. We find that Uttarakhand was able to rapidly catch up and subsequently exceed the per capita income of Himachal Pradesh within a relatively short period of time. The state was able to better leverage the benefits of the Concessional Industrial Package owing to a proactive and dedicated approach to town planning and land use policy."

States need to be incentivized to have a simpler process for sets of permissions required related to land-use (approvals relating to acquisition and aggregation, use/permissibility, building/construction and operation/management). This is similar to the approach adopted by the Union government's Scheme for Special Assistance to States for Capital Expenditure that has been operational since 2020. Under this scheme, a significant percentage of the total corpus of interest-free loans available to State governments is predicated on their performance and track record in undertaking land-related reforms in urban areas and urban planning reforms. Even the Urban Challenge Fund has a reform-linked funding framework[87].

By way of illustration, land acquisition process is lengthened and complicated by presence of multiple state and municipal agencies as follows:

- Land survey department prepares spatial/cadastral maps
- Land registration department/department of registration and stamps oversees land transactions
- Revenue department maintains the Records of Rights
- Municipal bodies collect property tax

[86] https://eacpm.gov.in/wp-content/uploads/2025/02/The-Great-Convergence-final-draft_28022025-1.pdf
[87] https://www.pib.gov.in/PressReleasePage.aspx?PRID=2227986&reg=3&lang=1

Lack of data sharing between planning, revenue, land survey, and registration departments delays projects in urban areas. This process may be streamlined by adding it as a conditionality for the use of the funds under Union government schemes.

One of the key bottlenecks related to land-use was unavailable and inadequate land records. The government has taken multiple measures to upgrade and digitise the system of land records to establish clean ownership records and reduce disputes such as Bhu-Aadhar.[88] The process remains underway to strengthen property ownership systems. States such as Uttar Pradesh and Karnataka have attempted to solve this problem by preparing an Urban Properties Ownership Record (UPOR) Scheme to link urban properties in the state with Aadhar card of the owner[89]. The scheme will not only help in surfacing '*benami*' properties but will also enhance tax collection in ULBs.[90]

Another constraint is the rigidities in the master-planning, land-use and building regulations. Key documents such as the Master Plan and Zoning Plan are not GIS-based and instead made on paper[91]. This makes land-use planning unscientific and susceptible to rent-seeking. Further, these key documents are not updated regularly and therefore have no link to the realities of a city's growth. There is a case to be made for having less-restrictive master plans and relaxing the zoning norms so that market forces can ensure more efficient allocation of the limited land available for productive uses.

Despite these constraints, the state governments have introduced various novel ways of managing land related issues for urban development. The Town Planning Scheme of Gujarat allows owners of land to voluntarily come together and notionally surrender a portion of their land for infrastructure and social development. The owners benefit from the higher value of the remaining land. While the Town Planning Scheme of Gujarat relies on notional surrender of property, the Land Pooling Scheme of Amravati, Andhra Pradesh uses legal transfer of property rights to the government. The participation is voluntary, but land can be taken if there

[88] https://dolr.gov.in/ulpin/
[89]https://www.livemint.com/news/india/property-will-be-linked-to-owner-s-aadhaar-card-in-uttar-pradesh-report-11570685128164.html
[90] Ibid
[91] Cognizant of this issue, Union government has launched a sub-scheme on formulation of GIS based Master Plan by cities in India under Atal Mission for Rejuvenation and Urban Transformation (AMRUT).. See: https://www.pib.gov.in/Pressreleaseshare.aspx?PRID=1849948&reg=3&lang=2

is failure in negotiations. Participants benefit from a portion of land parcel received back after development and monetary payment by the authority.[92]

Maharashtra has three different models which are meant for acquiring land for urban development. The *Navi Mumbai Airport Influence Notified Area* (NAINA) Scheme was introduced area of the greenfield airport project of Navi Mumbai. The scheme allowed landowners to cluster adjoining parcels of land and surrender about 40 percent to 50 percent to government authority while they benefit from additional development rights on their land. The second scheme *Accommodation Reservation and Transferable Development Rights*, Mumbai follows providing additional development rights but also allows transfer of these development rights. The *Cluster Redevelopment Scheme*, Mumbai is meant for building in derelict state. The work for such clusters is designated to a government agency or a private developer who takes the responsibility of acquiring the land through purchase or exchange. The promoter gains through gaining additional development rights which can even be transferred to other sites.[93] However, there needs to be continued efforts into identifying locally suitable solutions to managing demands of existing landowners, development requirements for urbanisation and providing incentive structure to both developers and landowners.

Industrial Development Authority (IDA)

IDAs present a dual solution both to the issues plaguing ULBs (delayed elections, one term limits for mayors) and the rigidities existing in land acquisition, conversion and use. The process of reforms in ULBs is by definition a long-term project. The minimum facilities that ought to be provided must be done at the earliest, within the institutional frameworks available. Therefore, some states have been innovative and creative in responding to the dire needs of citizens on the ground by setting up industrial development authorities (such as Greater Noida and Noida in Uttar Pradesh) to ensure planned urbanisation.

These IDAs typically control large expanses of space and develop it in a well-planned way. Bihar (Bihar Industrial Area Development Authority), West Bengal (Haldia Development Authority) & Jharkhand (Jharkhand Industrial Area Development Authority) are currently experimenting with these IDAs.

[92] https://wri-india.org/sites/default/files/Full-Paper-State-Led-Alternative-Mechanisms.pdf
[93] Ibid

The category of IDA includes bodies with different types of jurisdiction and powers. One typology based on geography is those with control over a specific geographical area (such as Noida, Bundelkhand and Gorakhpur in Uttar Pradesh, Gujarat Town Planning Scheme) and those with control over land parcels throughout the state for industrial development (Uttar Pradesh State Industrial Development Authority, Maharashtra Industrial Development Corporation)

Another typology of IDAs is based on the range of powers they are provided - land acquisition and disposal, infrastructure building, land management (cutting plots, providing utilities, development controls), municipal powers (under Article 243Q of the Constitution), powers to provide clearances or even power to have their own rules. Certain authorities have even more power - IFSCA under the Gujarat International Finance Tec-City (GIFT City) has powers of several financial institutions such as RBI.

Two models worthy of greater study are the Special Investment Region Act, 2009[94] (Gujarat) under which the designated authority has the power of land acquisition and disposal, land management, municipal functions and power of giving clearances. Second is the Uttar Pradesh Nodal Investment Region for Manufacturing (NIRMAN) Kshetra Act, 2024 which promotes greater decentralisation[95].

[94] https://gidc.gujarat.gov.in/pdf/act-and-rules/SIR_ACT_new.pdf
[95] https://www.indiacode.nic.in/bitstream/123456789/21567/1/english9of2024.pdf

CONCLUSION

By clustering businesses, talent and resources, urbanisation brings with it agglomeration economies and spurs economic activity. Factors such as better infrastructure, availability of skilled labour, connectivity to markets, build concentration of businesses leading to spillover of knowledge and technological advancement. All this promotes growth and overall development of the country.

Designing appropriate policies to solve ground issues for the public is an important exercise and demands careful deliberation. Governments devote substantial administrative, intellectual and financial resources to designing policy frameworks intended for welfare and growth. However, with time, ground realities change and existing policies lose their effectiveness. India's urbanisation story is a fitting case of this dynamic. In many instances, the areas which now embody and depict urban characteristics continue to be classified as rural. As the reclassification to urban lags behind, policy focus in these areas remains misaligned and policies tailored for rural areas are extended to these de facto urban areas.

Policies which are intended for urban areas help in enabling agglomeration economies through easier norms for functioning of large businesses as well as focus on handling higher population densities, provide connectivity solutions and underlying support infrastructure needs. Failure of supporting infrastructure and services has a wider and deeper impact in urban areas compared to rural regions. Applying welfare and agricultural centric policies intended for rural areas to these newly transformed de facto urbanised cities is misallocation and inappropriate use of resources.

Economic Survey 2026 had a chapter dedicated to urbanisation titled *Urbanisation: Making India's Cities Work For Its Citizens*. It urged the policy establishment of India to reimagine our cities as economic assets that deserve investment, not as habitats that demand welfare spending[96]:

> *"A meta-analysis of agglomeration economies in developing economies by Grover, Lall and Timmis (2021) finds that doubling city size typically boosts productivity by 12 percent in India. Therefore, it becomes imperative that cities be viewed not only as habitats but as*

[96] https://www.indiabudget.gov.in/economicsurvey/doc/eschapter/echap15.pdf

vital economic infrastructure. Edward Glaesar in his book "Triumph of the City" says, Cities are humanity's greatest invention because they make us more productive, more innovative, and ultimately richer."

However, the absolute increase in India's urban population and size of its cities, "has not translated proportionately into urban productivity, liveability or global economic influence."[97] The purpose of this paper is to propose various ways in which India can find a pragmatic way towards urbanisation and assist growth in the process. The paper highlights several issues ranging from the de facto urban areas being governed as rural, the absence of incentives for better performance to bureaucrats, frequent transfers in the administrative space, lacking revenues with local governments and bottlenecks to land allocation.

Using GHSL data and spatial imagery from ISRO providing high-resolution daytime satellite estimates on built-up volume, we analyse district level status of built-up volume and growth rate between 2015 and 2020, allowing for area wise density and per capita determinants to propose a formula-based mechanism to classify and delineate rural and urban agglomerations. This will enable a continued process of analysing transition of rural areas into urban cities and accordingly reclassify as well as allocate funds aligning to evolved requirements.

Our primary recommendation is that built-up volume using satellite data be utilised to differentiate urban vis-à-vis rural avoiding any erroneous classifications of a developed city with lower population size and density. Other recommendations include having trigger mechanisms to start labelling settlements as "urban" from "rural" after prescribed thresholds are reached, administrative reforms to promote urbanisation, newer avenues for raising finance by urban local bodies and establishing industrial development authorities to assist in planned development of the region as well as better land acquisition and disposal, infrastructure building and overall land management.

Most importantly, the paper emphasizes that the disbursement of funds under Union schemes over the next five years must be linked to needs on the ground as captured in a formula that gives appropriate weight for newly urban and rapidly urbanising areas. However at the end of five years, a new performance framework must emerge wherein any future disbursement of

[97] Ibid

funds and performance evaluation of officers posted in urban areas must be linked to the attainment of five outcomes listed above.

A structured approach towards urbanisation is one of the most important requirements towards growth of India towards a Viksit Bharat as well as prevent many of the modern issues accompanied by unplanned development.