



Cities as Engines of Growth*

Technical Session 2

Building Capacities and Transforming City-Regions as Engines of Economic Growth

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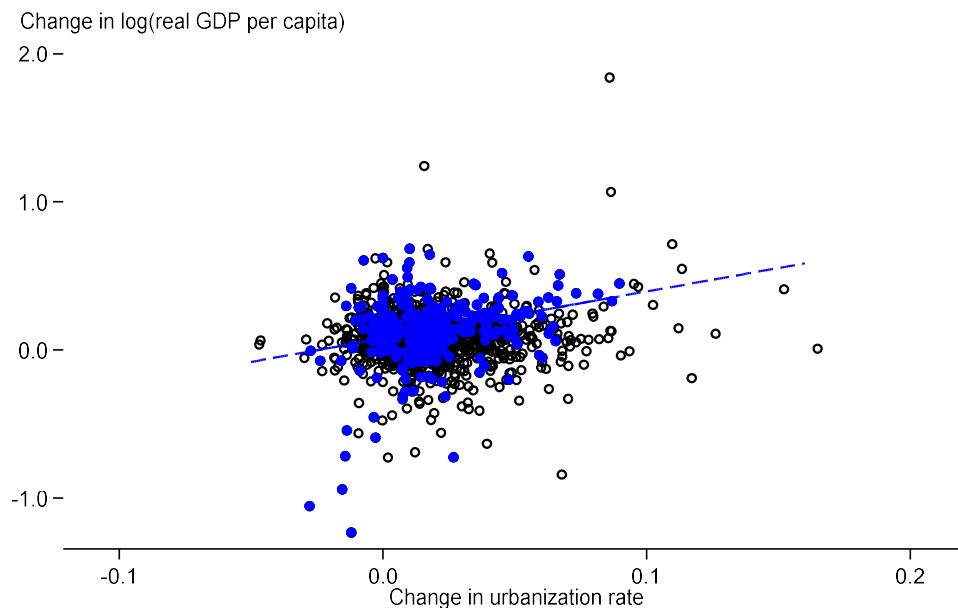
*This presentation draws upon several studies, including [Fostering Growth in Asia's Cities](#) (ADB 2019) and the ongoing study by NITI Aayog and ADB, [Cities as Engines of Growth: Strengthening the States for Broad Based Urban Development](#).

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Why the interest in cities as engines of economic growth and jobs?

- Global experience: Urbanization and economic growth are intimately connected.
 - Cities are where manufacturing and services are produced most efficiently
 - They are where job opportunities arise across an array of industries
- Underlying reason: Existence of agglomeration economies

Faster urbanization and economic growth are correlated



Source: ADB estimates based on UN (2018) World Bank (2019).

The benefits of agglomeration

Concentration of households and firms in a given location enables:

- **Learning** through spillovers of ideas and knowledge
 - Garments in Dhaka, soccer balls in Sialkot, IT startups in Bengaluru
- **Matching** of input-output markets
 - Workers find more suitable jobs
 - Firms locate next to suppliers and buyers
 - Tap into wide-ranging expertise
- **Sharing** of resources
 - Physical infrastructure*
 - Social infrastructure, including housing

Key concern: Weakly managed urbanization will not lead to strong economic growth and good jobs

A tale of two cities

Chongqing, PRC

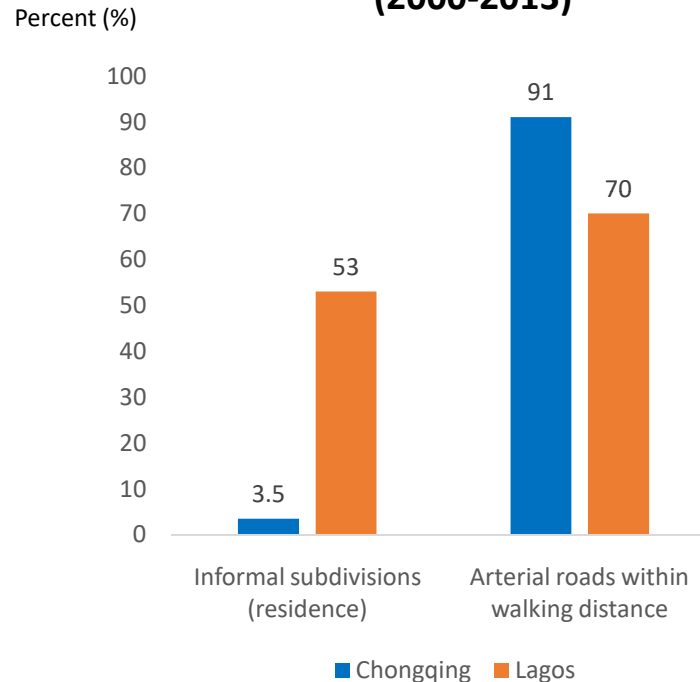
Population: **13.4M** (2015)

Key companies—major tradeables producers:
IBM, Foxconn, Cisco Systems, Ford Motor Company

Unemployment rate:
3.9% (2010)

Source: UN (2018) and China Statistical Yearbook (2018)

Share of informal subdivisions in residential areas and share of arterial roads within walking distance (2000-2013)



Source: ADB estimates based on 2016 Atlas of Urban Expansion

Lagos, Nigeria

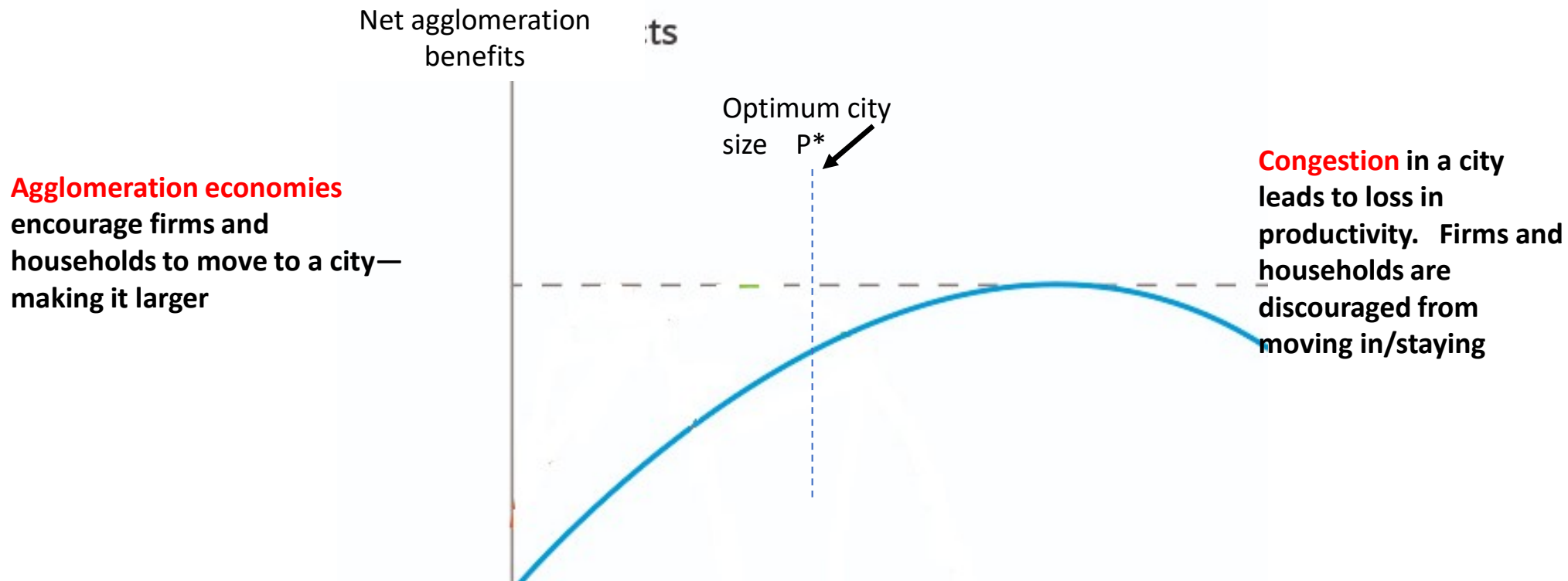
Population: **12.2M** (2015)

Key companies—natural resource and daily consumables:
Seplat Petroleum, Dangote Cement, Nestlé Nigeria, Nigerian Breweries

Unemployment rate:
27.6% (2010)

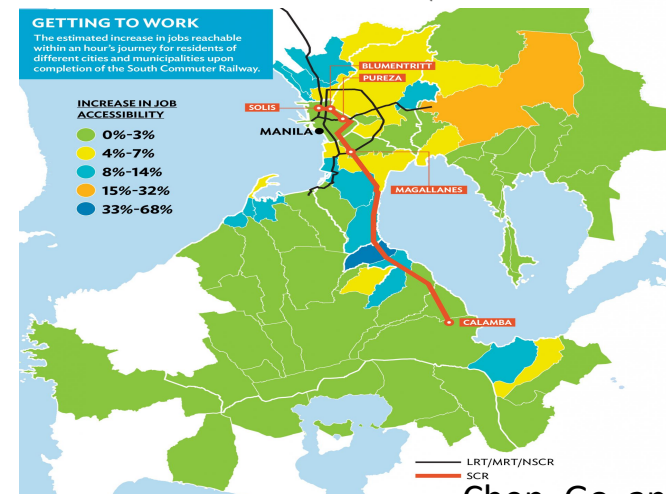
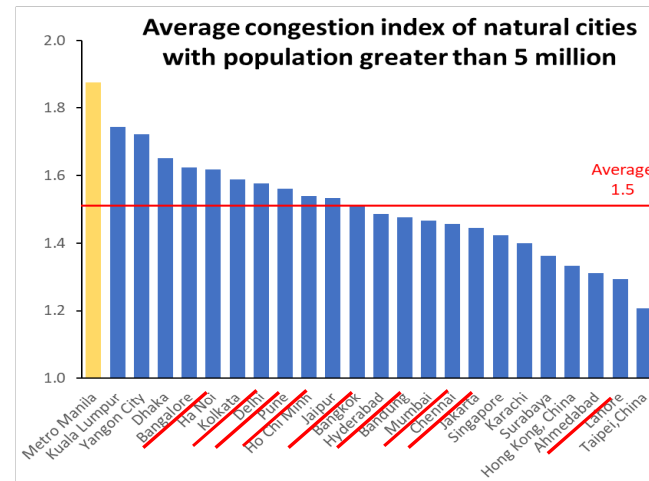
Source: UN (2018) and Nigeria Data Portal (accessed 27 September 2019).

Reason 1: Benefits from “agglomeration economies” may get short-circuited by forces of congestion



Transport infrastructure has a key role to play in reducing congestion and raise job accessibility and productivity

- Transport infrastructure raises job accessibility
 - In Philippines, households in the catchment area of the South Commuter Rail are estimated to reach, on average, 300,000 more jobs within an hour as compared to road transport.
- Productivity per worker is closely correlated to the average number of jobs per worker that can be reached in less than 60 minutes.
 - In Korean cities, an increase of 10% in the number of jobs accessible per workers corresponds to a 2.4% increase in workers' productivity.

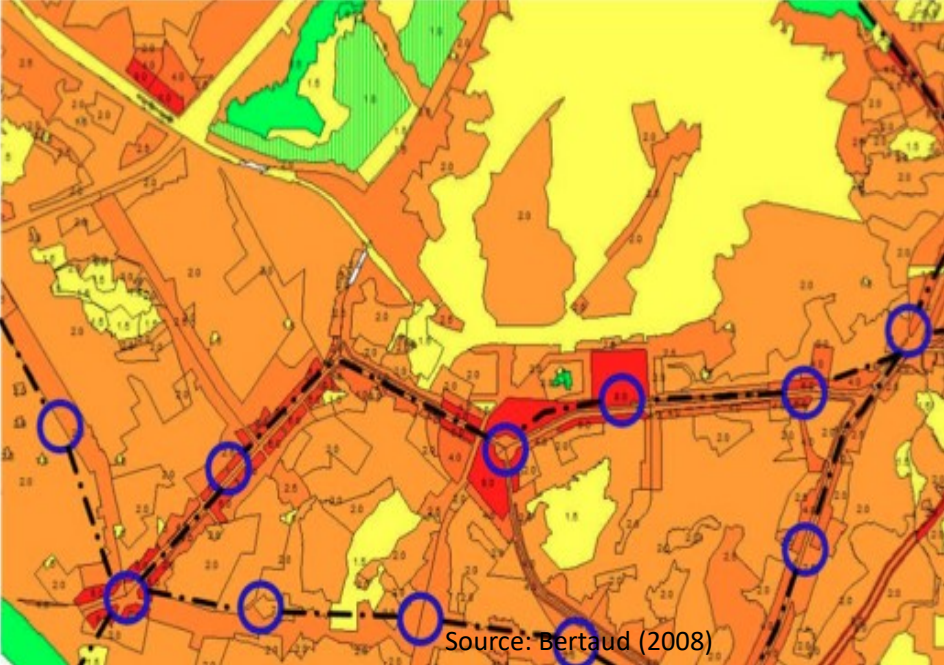


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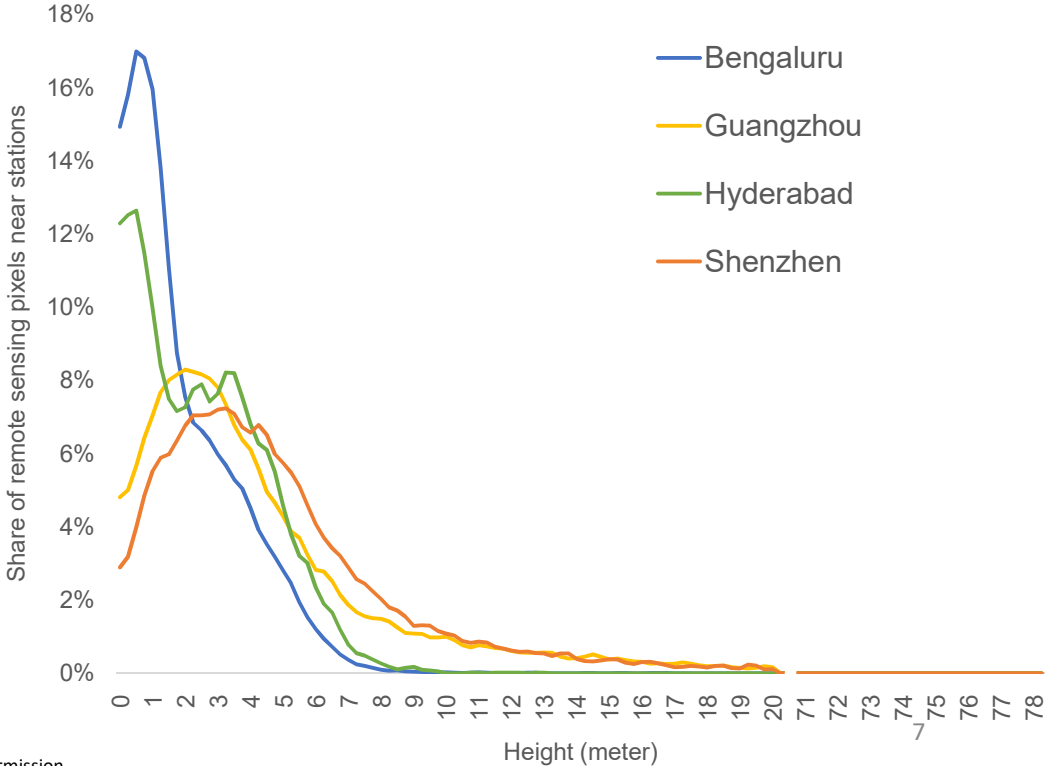
Chen, Go, and Jiang, ADB

BUT: Maximizing benefit of transport networks requires complementary urban planning norms

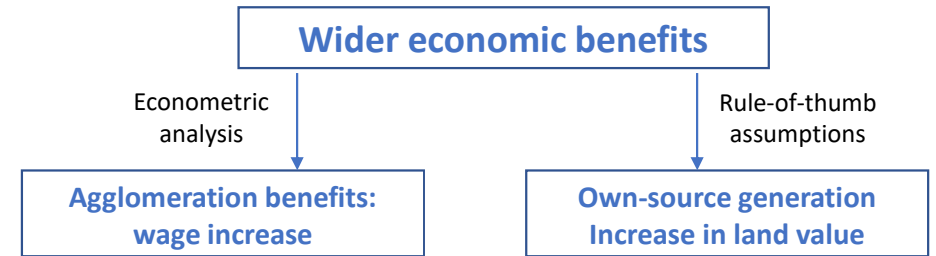
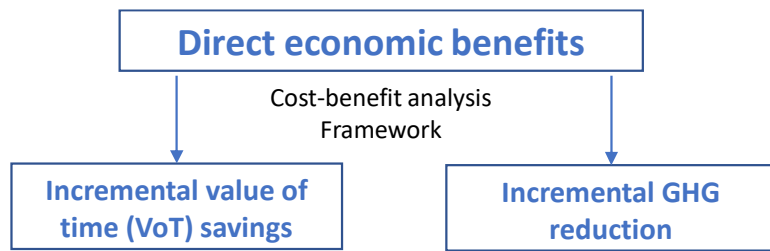
Seoul: Highest Floor Area Ratio are linked to the location of metro stations and to the network of main streets



Frequency distribution of remote sensing pixels by height around metro stations 2015



Simple simulation for Bengaluru: Relaxing FAR restrictions could greatly enhance returns on metro investments



Scenario		Seoul intermediate regulatory FAR	Seoul aggressive regulatory FAR	Shenzhen consumed FAR
Direct Economic Benefits	Annual time savings (million hours)	77	93	63
	Annual value of time savings (2020 ₹ million)	10,002	11,927	8,008
	Annual GHG Reduction (tons)	25,894	33,275	8,470
Agglomeration Benefits	Average change in job density (jobs/square kilometer)	3,063	4,802	5,766
	Average increase in monthly wages (₹)	16,308	29,380	15,290

Changes to baseline (%)	Seoul regulatory FAR	Shenzhen consumed FAR
FAR relaxation		
Property value	32	40
Property tax residential	36	39
Property tax non-residential	51	37
Net profit	31	42
FAR relaxation + metro investment		
Property value	34	43
Property tax residential	38	41
Property tax non-residential	55	39
Net profit	34	45

Source: ADB estimates. Note: (i) Distribution analysis shows that wards that benefit from increased job density host over 9% of the slum population. (ii) Realized gains are sensitive to first-mile-last-mile connectivity. (iii) ₹ = rupees, FAR = floor area ratio, GHG = greenhouse gas. (iv) Caveats: Assumes densification automatically happens. Other limitations may emerge – e.g., utility shifting.

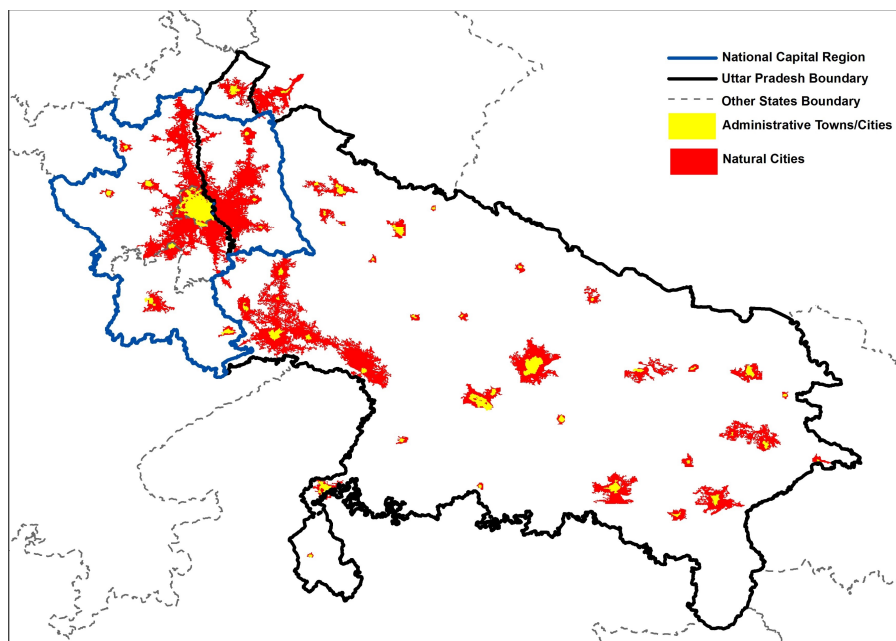
Does not account for relocation of people or firms and staff. It may be shared outside ADB with appropriate permission.

Reason 2: Lack of coordinated economic and spatial planning at city-region scale

1. **Appropriate geographic scale** over which development needs to be planned covers multiple administrative units, potentially crossing district and even state boundaries

2. **Firms need many publicly provided inputs to thrive.** Are industrial/economic planning and urban planning coordinated to ensure these inputs are available?

Urban activity spills across municipal boundaries: Illustration from U.P.



Note: ADB (2019) defined “natural cities” in red; constituent administrative cities in yellow as per 2011 Census.

Coordinated economic and spatial planning: Role of local governments

- Policies to promote entrepreneurship and new activities (manufacturing, IT, universities, research labs, etc.) are common
- Often designed by central and state/provisional governments and not local governments
- **BUT: Firms exist and operate in specific locations.** The business environment in these locations is ultimately what matters.
- Where do local governments enter in decision-making process?
 - Active role in many developed countries and East Asian countries
 - Local officials are **incentivized and empowered** to ensure that firms and industries find the city and its urban periphery an attractive location
- Given limited role of India's local governments in economic development functions, how can greater coordination be achieved between economic and spatial planning?



NITI Aayog – ADB study on “Cities as Engines of Growth”

Strengthening the states for broad
based urban development

Ongoing study

Knowledge partner PWC

Objectives

- Sensitize state governments on cities' role as engines of growth and jobs
- Identify key bottlenecks
- Develop implementable solutions, including mechanisms for coordinating spatial and economic planning.
- Set the stage for a deep dive on the types of investments and activities that states and cities should prioritize from a growth and jobs perspective

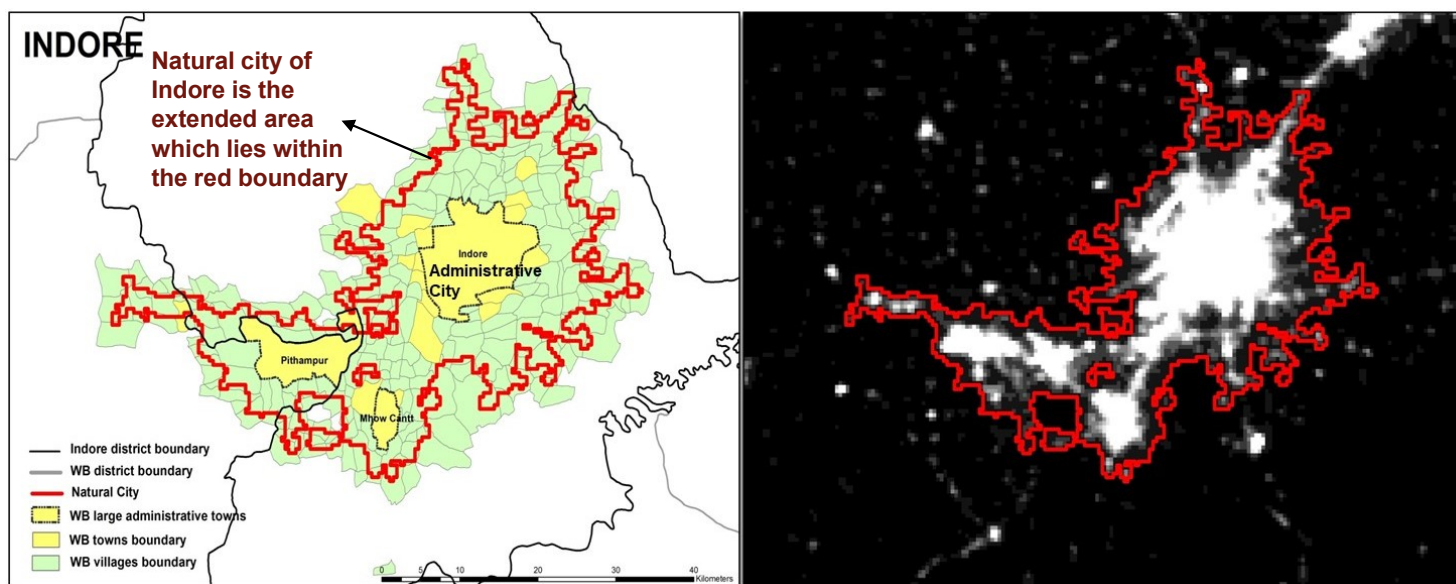
Project cities

- Executed in 7 states: Andhra Pradesh; Assam; Gujarat; Haryana; **Madhya Pradesh**; Sikkim; and Telangana with PwC as knowledge partner.
- Assessments in selected cities

	Small (2011 population less than 300,000)	Large (2011 population 300,000 to 3 million)
Manufacturing-based (city and surroundings)	Navsari (Gujarat) Sonipat (Haryana)	Vadodara (Gujarat) Indore (MP)
Modern services-based (city and surroundings)	Gangtok (Sikkim)	Guwahati (Assam) Hisar (Haryana)
Diversified (city and surroundings)	Machilipatnam (AP) Dewas (MP) Nalgonda (Telangana)	Vijayawada (AP) Warangal (Telangana)

Cities are defined to include their urban peripheries: Illustration from Indore

Delineation of natural contours of Indore city: Map depicting Administrative City (AC) and Natural City (NC) of Indore



- 'Natural City' as a concept is larger than the statutory town and encompasses multiple small towns that are close to one another and likely linked by flows of goods, services, people and presence of production and consumption activities.
- It uses nighttime lights data from satellite images to capture the entire land area around a city with positive luminosity values.

- The map depicts, the city of Indore and not only the administrative city (AC) of Indore, but much of the district of Indore and parts of adjoining districts- Natural city (NC).
- It covers 20 towns and 265 villages that have urban types of economic activity as captured by NTL data.
- The largest of the 20 towns includes the AC of Indore, Pithampur and Mhow Cantt.
- Pithampur is not in the district of Indore, but in Dhar district.

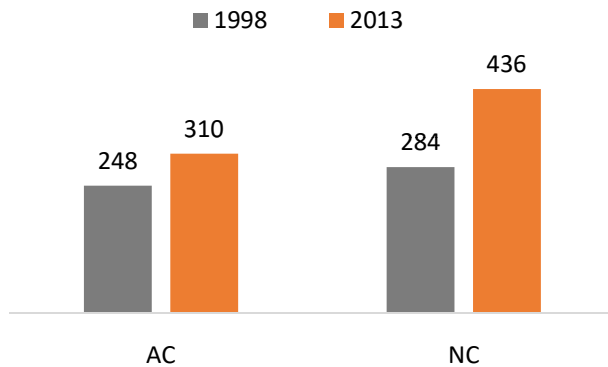
Source: Nighttime light data.

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Why does this matter? Economic activity spills across administrative boundaries

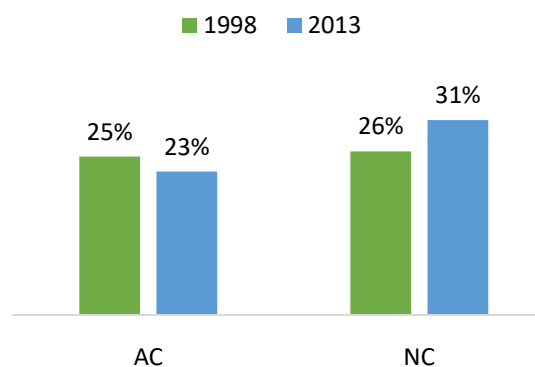
Comparison between economic structure for Indore NC versus Indore AC

a Total employment (in '000)



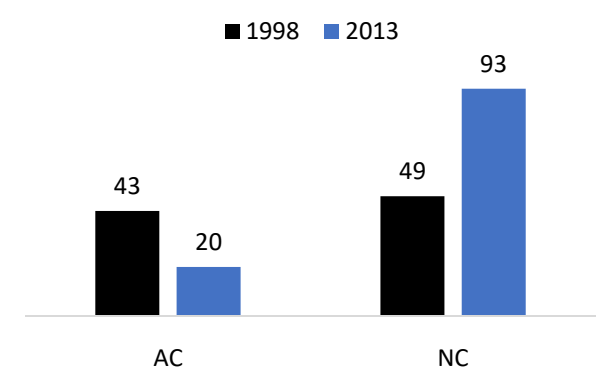
- The NC of Indore shows the city to have a little over 436,000 people employed, i.e., **about 41 percent more than the AC of Indore in 2013.**

b Share of manufacturing employment (in total employment)



- NC shows that Indore stands out in terms of having a high employment share in manufacturing industries** (31.1 percent versus 23.0 percent for the AC).
- The AC, the share of manufacturing employment has declined between 1998 and 2013.**
- There are many **more large enterprises in Indore NC vis-à-vis Indore AC.**

c Number of large scale enterprises (>=100 workers)









Source: Nighttime light data, Economic Census 1998 and 2013.

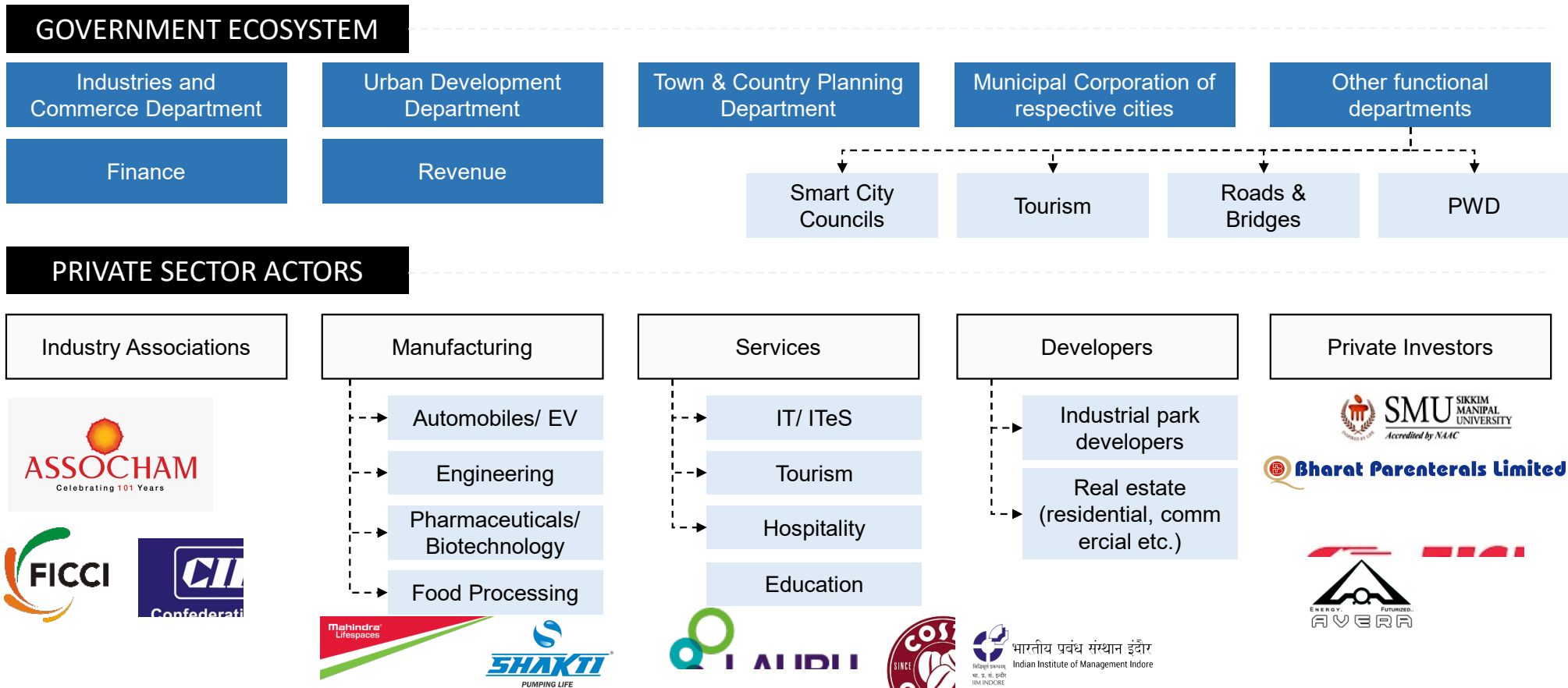
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Economic drivers: Manufacturing on the urban periphery and services within administrative city

Major manufacturing activity concentrated outside the Administrative City (but within Natural City)

	Pithampur	Dewas
1 Large scale industrial areas	<p>Pithampur industrial area which together host 1,500 large & MSME set-ups</p> <p>SEZ in Pithampur which covers total area of 3,000 acres</p> <p>Private sector led development such as Japanese and SEFEAN industrial township</p>	<p>Dewas industrial belt houses around 800 large and small industries scattered around 4,000 acres</p> <p>Sanwer industrial belt spread across 1,000 acres</p>
2 Major growth sectors	<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  Chemical </div> <div style="text-align: center;">  Automotive </div> <div style="text-align: center;">  Textile </div> <div style="text-align: center;">  Electrical machinery </div> <div style="text-align: center;">  Pharmaceutical </div> <div style="text-align: center;">  Metal works </div> </div>	
3 Key enablers which facilitated manufacturing competitiveness	<ul style="list-style-type: none"> • Pithampur, Dewas and Mhow Cantt towns are located around 30 km from the AC of Indore • The prime large scale industrial clusters in the NC are along AB road, which is covered by Delhi Mumbai Industrial Corridor (DMIC). • Existing base of industrial ecosystem in Pithampur and Dewas also facilitated manufacturing competitiveness of these regions. 	

Guiding issue: What are the public inputs that firms need to thrive in a given location?



Bottlenecks constraining city potential

Analysis of secondary data, desk research, and discussions with government and private sector representatives to capture supply-side and demand-side issues, respectively, suggest various bottlenecks

1. Lack of *city-level* economic vision
2. Challenges related to land supply and regulation
3. Lack of integrated planning of urban and industrial infrastructure
4. Capacity constraints and inadequate institutional framework
5. Policy and regulatory constraints.

Illustrative solutions

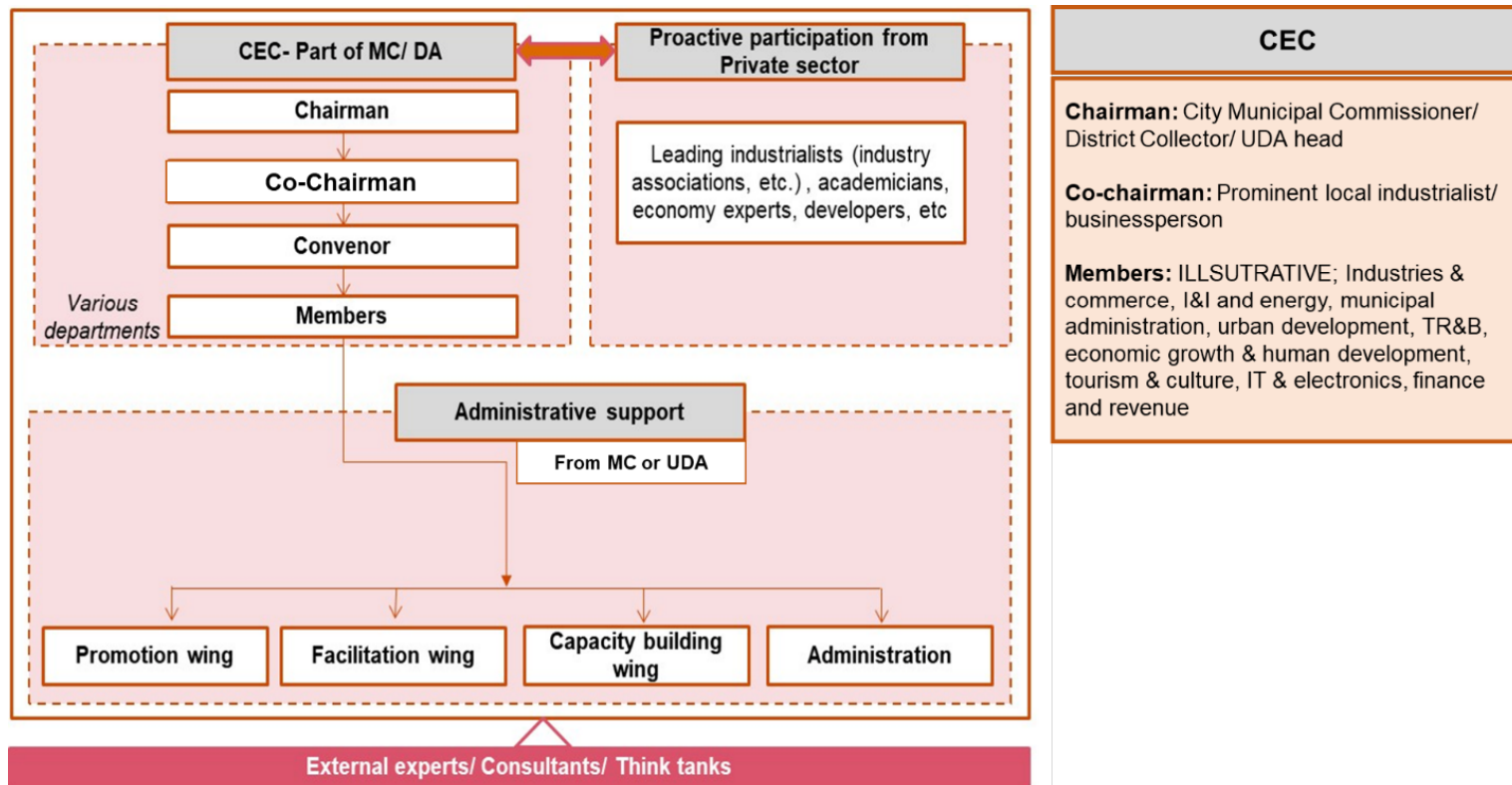
1. Create an economic vision for the city around which public agencies converge.
2. Conduct master planning at **city-region level**, use “cluster-based planning” for key locations and introduce statutory provisions that allow changes in land-use definitions and regulations at predefined time periods.
3. Integrate functions of revenue, registration, and survey institutions to harmonize land records data and explore alternative models for land acquisition and aggregation.
4. Mandate participation by ULBs and relevant urban departments in the economic planning and visioning processes through legal frameworks such as the Special Investment Region Acts.

Note: Study team interacted with 70+ government stakeholders and 60+ private sector stakeholders

Formulating an economic vision for cities

- ***What can the city be famous for?***
 - Assess which sectors and activities are likely to drive the local economy while being competitive at regional, national, and even global levels
- ***Identify and define role of stakeholders.***
 - Government, industry bodies, investors, developers, etc.
- ***Identify key enablers.***
 - Infrastructure, land, skills, policies and regulations, capacity building and institutional innovations.
- ***Develop strategic action plan***
 - Multisector investment plan for priority projects and mobilize resources
- ***Have frequent stakeholder consultations***

Developing the vision: City Economic Councils



Cases of Indore and Dewas

- Vision: Conceptualize a ***Greater Indore Region*** to be developed with:
 - Indore as a hub for hi tech engineering and services
 - Dewas as a manufacturing and logistics hub
 - Pithampur and Mhou should also be included
- Greater Indore Economic Council
 - Key roles for industry, urban development, and town and country planning departments
- Development plan for the Greater Indore Region
 - Public transport, affordable housing, social amenities
 - Timely revisions for the master planning process and more flexibility in changes to land use

Next steps and related agenda

NITI and ADB to explore joint work with states to support them in harnessing the full economic potential of their cities and towns

Analysis of related issues: Transit-oriented development, climate resilience, and municipal finance

Conduct rigorous data analysis on economic cost and benefits associated with better urban planning

Explore opportunities for “sector development program”—policy component and investment program—and leverage **Budget 2022** agenda to support reforms in urban planning and capacity development

Thank you!