RESEARCHING REALITY WINTERNSHIP|2013

Private Provision of Urban Utilities

THE SOLUTION TO INDIA'S URBAN PROBLEMS?

AN INTRODUCTION

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ABSTRACT

India's urban infrastructure is already under tremendous stress, if not absent. Land regulation has driven up realty prices, roads are narrow and unsafe, public transport is near absent with power cuts a fact of life. Indians have learned to live like the minions of the state – the inefficient, wasteful and corrupt construct which is particular about taxing it's workmen, but inept in keeping its promises. This has been the state time immemorial. While the paper intends to make a case for "Free Cities" or "Charter Cities" its scope is limited to areas like private roads, urban planning, zoning and environmental externalities.

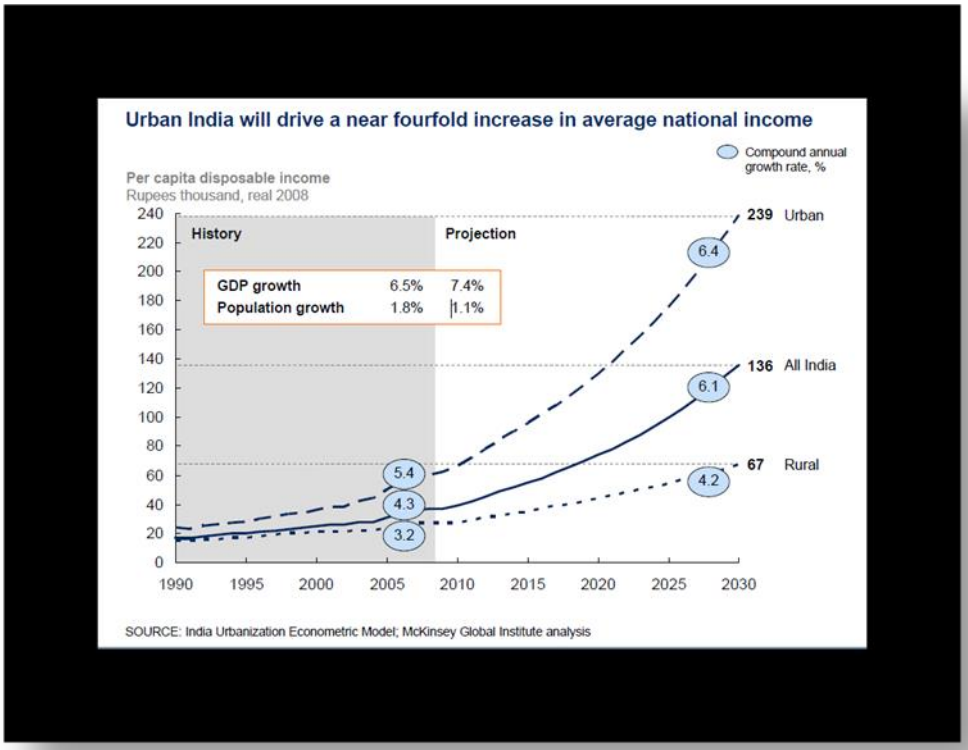
This paper attempts to highlight the difference that the absence of a Municipal Corporation can make to cities by examples of Gurgaon and Jamshedpur. Gurgaon has become one of India's biggest financial centers on the back of easier land acquisition and DLF is making all attempts to make its residential and commercial complexes as independent as possible. Jamshedpur has a large part of the city leased to TATA which manages it via its subsidiary company JUSCO. The city is one of the cleanest in the country, with potable water in water taps and uninterrupted power supply at extremely affordable prices.

Hong Kong is the closest that we have to a "Free City" and if we endeavor to replicate its success, probably there is much to be learnt from its story. Its reference seeks to establish the overall practicality of the idea of a small self-sufficient government, low taxes, liberal labour laws, free trade and the uncompromised rule of law.

PREFACE

India is on the move. Economic reform has already unleashed investment and growth, offering its citizens rich opportunities. Although the Indian economy has been resilient so far, the key issue now is how to sustain this momentum. Turning around its cities and releasing their dynamism will be critical to India's future economic growth. Unlike many countries that are grappling with aging populations and rising dependency ratios, India has a young and rapidly growing population—a potential demographic dividend. But India needs thriving cities if that dividend is to pay out. New research by the McKinsey Global Institute(India's Urban Awakening, 2010), the economics and business research arm of McKinsey & Company, estimates that cities could generate 70 percent of net new jobs created in 2030 produce more than 70 percent of Indian GDP, and drive a near fourfold increase in per capita incomes across the nation(Exhibit A). Surging growth and employment in cities will prove a powerful magnet.

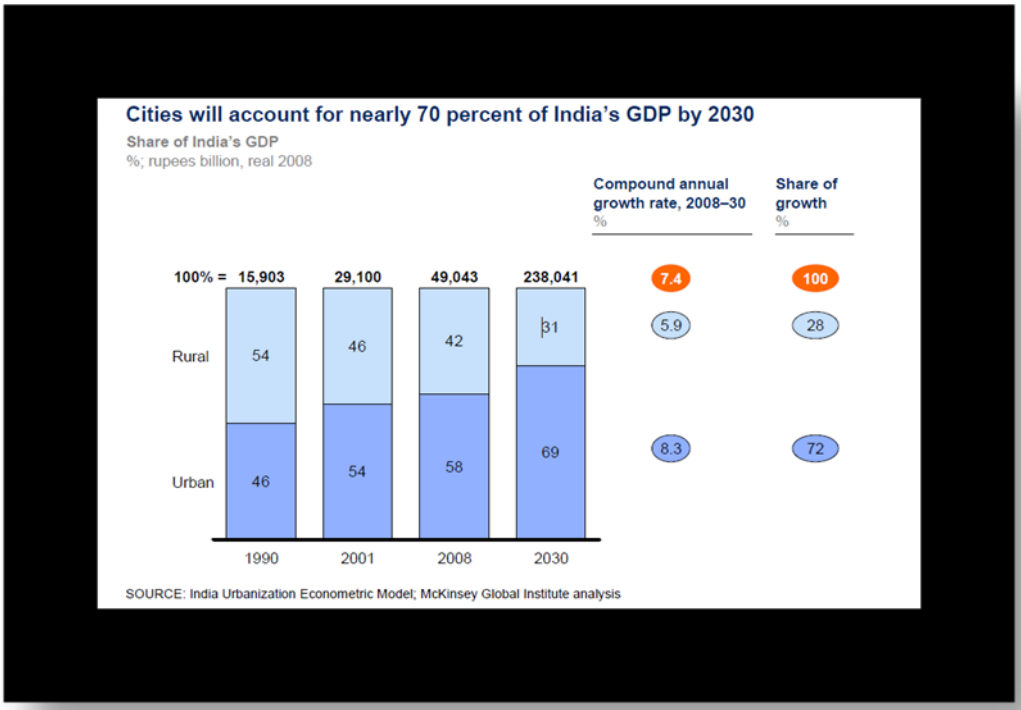
Exhibit A



India's urban population grew from the 290 million reported in the 2001 Census to an estimated 340 million in 2008, and MGI projects that it could soar further to 590 million by 2030. This urban expansion will happen at a speed quite unlike anything India has seen before. It took nearly 40 years (between 1971 and 2008) for India's urban population to rise by 230 million. It could take only half that time to add the next 250 million. The speed of urbanization poses an unprecedented managerial and policy challenge—yet India has barely engaged in a national discussion about how to handle this seismic shift in the makeup of the nation. Indeed, India is still debating whether urbanization is positive or negative and whether the future lies in its villages or cities. This is a false dichotomy—villages and cities are

interdependent and symbiotic. In fact, the urban economy will give 85 percent of total tax revenue, which will finance development nationwide. And some 200 million rural Indians who live in proximity of India's largest 70 cities will directly benefit. But cities themselves are not just home to the prosperous. Far from it, some 75 percent of urban citizens live in the bottom income segments, earning an average of 80 rupees (around $1.80) a day. Addressing life in India's cities is clearly not an elitist attempt but rather a central pillar of inclusive growth.

EXHIBIT B



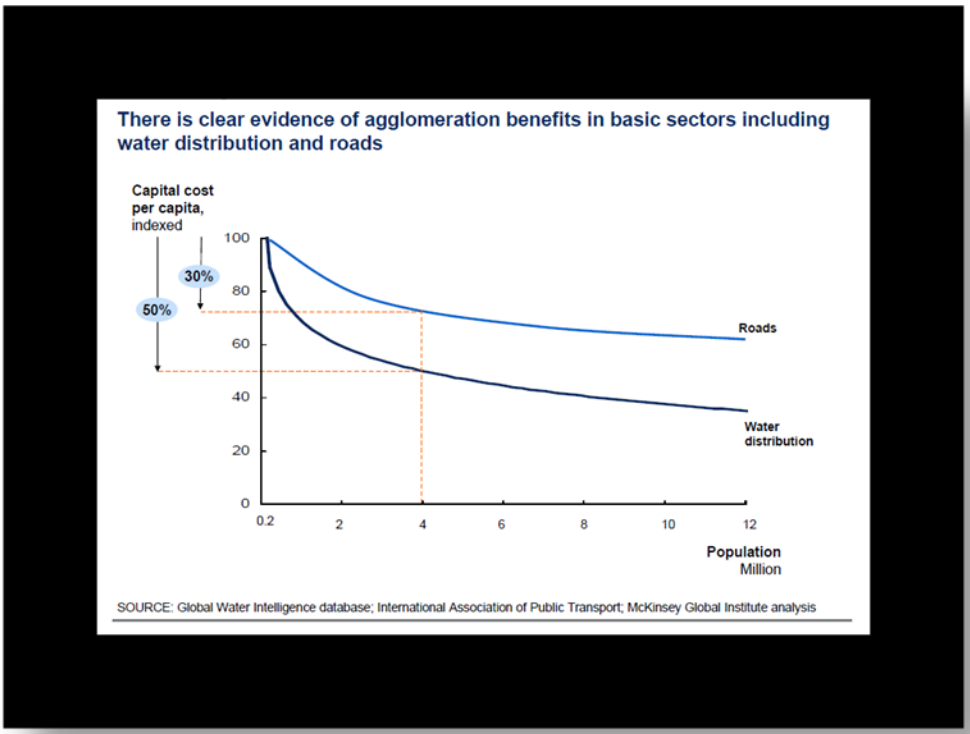
CITIES and INCLUSIVE ECONOMIC GROWTH

Cities are about more than just economic growth and higher incomes—they perhaps offer the best promise of a higher quality of life for the largest number of Indians. By providing an efficient vehicle for delivery of basic services, generating the majority of taxes, and by benefiting rural areas in their proximity, cities play a vital role in expanding the fruits of India's economic growth to a wider section of its population.

Cities can be a cost-effective vehicle to expand access to basic services

Research over the last few decades has pointed to consistent evidence of the agglomeration benefits of cities. Such benefits play out in at least two ways. First, cities allow for interactions that promote productivity, one of the underlying drivers of economic growth. Second, scale benefits offered by cities—in India and around the world—offer the opportunity to significantly lower the cost of service delivery. This is particularly relevant for a country like India, which faces a significant challenge of rapidly ramping up basic services to a very large section of its population when funds are constrained. Research indicates that the cost of delivering basic services is 30 to 50 percent cheaper in concentrated population centers than in sparsely populated areas. Given finite public resources, such potential savings could be vital if the government is to meet its aspiration for improving quality of life at affordable prices.

Exhibit C

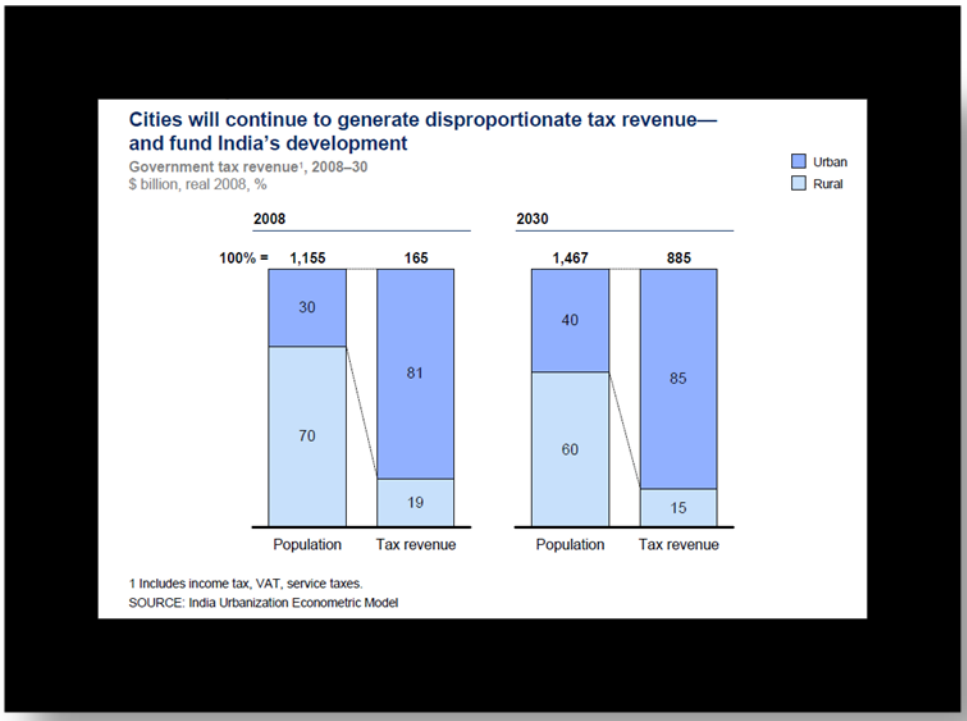


Cities will continue to account for the bulk of tax revenue vital for development spending

The research estimates, for instance, that the cost of delivering a liter of piped water is around 50 percent cheaper because cities are able to leverage common supply depots and cut distribution costs (Exhibit C).The same advantage holds true for higher-end infrastructure as well. Some elements of the infrastructure that are critical to high-end services such as international airports—are economically feasible only in population centers of a certain minimum size. The analysis shows, for instance, that it takes $4.8 million in capital expenditure per daily flight in a city whose population exceeds 4 million—but nearly $13 million in a city of less than 1 million.

Cities are also vital for the funding of development because they generate the lion's share of India's tax revenue—between 80 and 85 percent. In 2008, cities accounted for more than 80 percent of India's tax revenue despite accounting for only 58 percent of economic output. While we can partly attribute this disproportionate share to the location of headquarters of pan-national companies in major cities, the fact remains that tax collection is more robust in India's urban areas than in its villages. By 2030, MGI projects that 85 percent of tax revenue will come from cities (Exhibit D). So the robust health of urban India will be vital to enable sufficient spending on the development of the whole economy—urban and rural.

Exhibit D



Rural areas near India's large cities will benefit directly from urban growth

Cities have benefits beyond their own boundaries. The research finds that some 180 million people who live close to cities will benefit because they will enjoy improved access to jobs, markets, and the connecting infrastructure. Rural populations adjoining large urban centers today have an estimated 10 to 20 percent higher incomes than the rural average. We estimate that 180 million such rural residents live next to the 70 largest urban centers in India, a number that will increase to around 210 million by 2030.

Urbanization complements efforts to improve rural incomes. Improved agricultural productivity and resulting higher incomes are possible only if India creates substantial nonagricultural jobs to absorb the surplus labor force in agriculture. Cities will play a vital role in this job creation. MGI's 2001 report, *India: The growth Imperative*, examined scenarios for raising agricultural productivity. The research found that a twofold increase in agricultural productivity is possible through improved yields and mechanization, but will release an estimated 50 million to 130 million agricultural workers. These workers will need to find alternative jobs, the vast majority of which will be in cities.

Cities already matter to India. By 2008, an estimated 340 million people already lived in urban India, representing nearly 30 percent of the total population. Over the next 20 years, urban India will create 70 percent of all new jobs in India and these urban jobs will be twice as productive as equivalent jobs in the rural sector. As a consequence, MGI projects that the population of India's cities will increase from 340 million in 2008 to 590 million by 2030—40 percent of India's total population.

INDIA'S CURRENT ECONOMIC APPROACH WILL LEAD TO URBAN DECAY

As a result of deep-seated economic reform in recent years, India has made significant strides, achieving strong rates of economic growth and rising incomes. But it is questionable whether India can sustain its economic momentum unless it acts decisively to manage its growing cities. Even at today's urban scale, India is struggling. The infrastructure of its cities is looking decidedly tattered and access to basic services in urban areas continues to be poor. Superimpose a surge in demand for services from an expanding urban population and rising incomes, and India's aspiration for social cohesion and sustainable economic growth could reach a breaking point. The risk is that the quality of life in urban India will deteriorate, gridlock will hopelessly compromise productivity, and investors will decide that India's cities are too chaotic for their businesses to thrive.

GOOD CITIES OFFER ROBUST ECONOMIC GROWTH AND A SUSTAINABLE QUALITY OF LIFE

Cities have existed throughout modern history in every part of the world. Some have been successful, others not. Cities that have prospered have always delivered a compelling proposition to citizens who choose to bring their talent and energy to the city's fabric, and to investors who opt to bring their capital and enterprise, thereby sustaining urban livelihoods and growth. Those cities that offer an attractive proposition to business and people create a virtuous cycle that creates jobs, fosters talent, attracts capital, boosts productivity, and improves the quality of life for residents. Not all cities achieve this virtuous cycle—and lose out to other urban centers that offer a more attractive proposition to skilled people and business investors. Such cities simply cannot leverage the potential economic benefits that urbanization can confer and suffer not only a deteriorating quality of life but also, eventually, sub par economic growth.

INDIAN CITIES ARE ALREADY STRUGGLING TO PROVIDE A BASIC QUALITY OF LIFE

Urban India has attracted investment on the back of strong growth but is failing its citizens. Across all major quality-of-life indicators, India's cities fall well short of not only the levels of service to which international cities aspire but even a "basic "standard of living for their residents (these basic standards have been defined using combination of Indian and international benchmarks). While this is true across every service, we are choosing to highlight the poor quality of physical infrastructure as a particular example of the crisis affecting Indian cities.

Exhibit E1

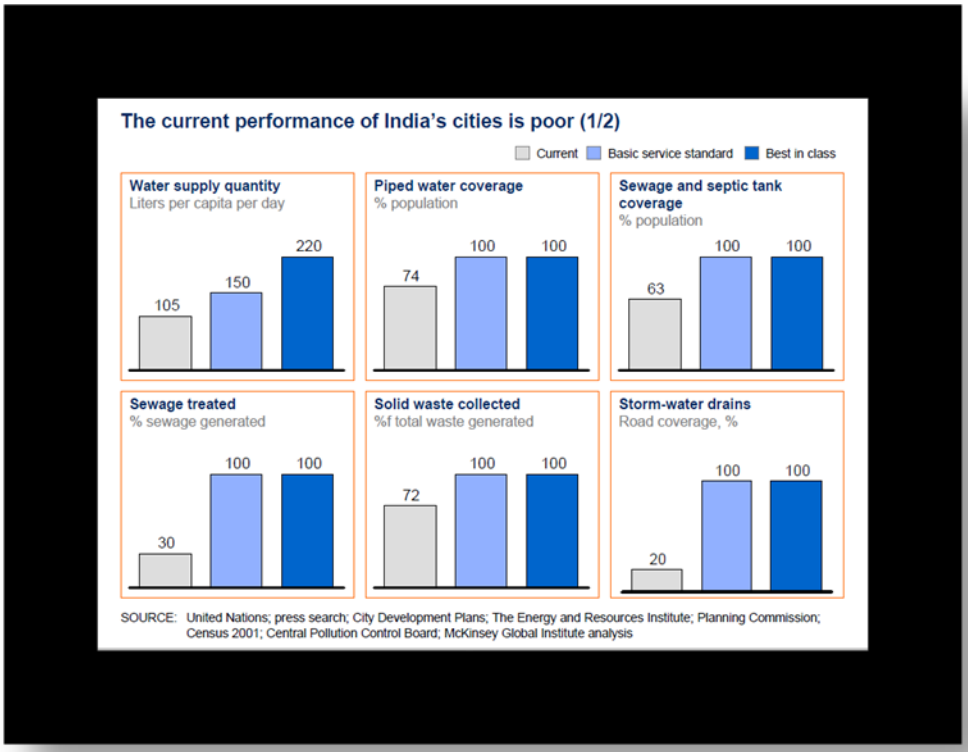
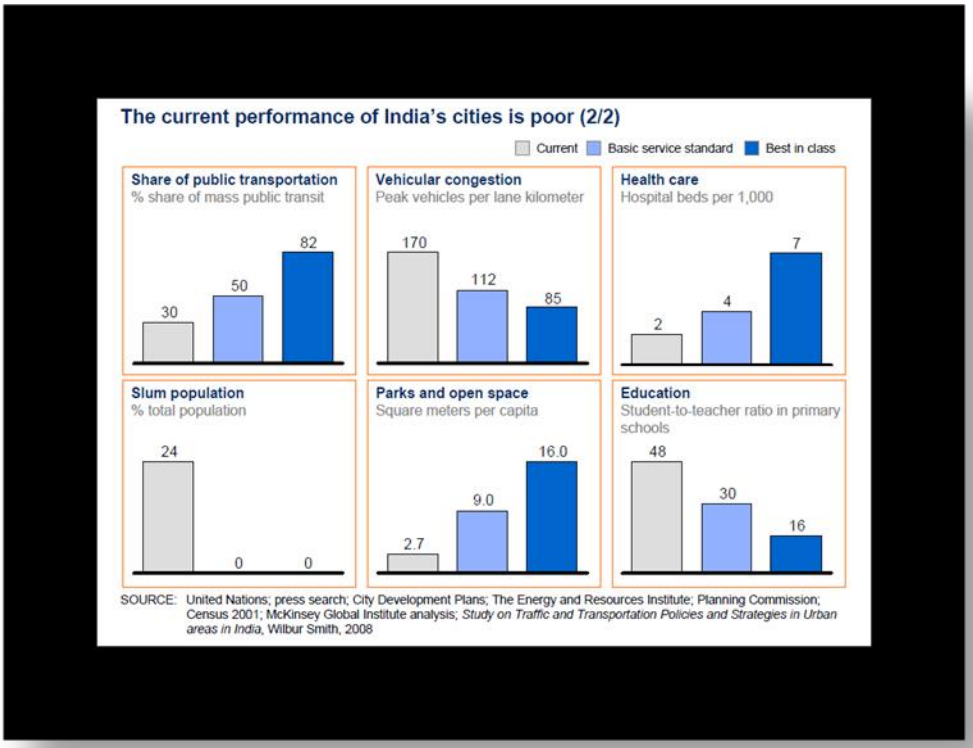

The current performance of India's cities is poor (1/2)
Current
Basic service standard
Best in class
Water supply quantity
Liters per capita per day
105
150
220
Piped water coverage
% population
74
100
100
Sewage and septic tank coverage
% population
63
100
100
Sewage treated
% sewage generated
30
100
100
Solid waste collected
%f total waste generated
72
100
100
Storm-water drains
Road coverage, %
20
100
100
SOURCE: United Nations; press search; City Development Plans; The Energy and Resources Institute; Planning Commission; Census 2001; Central Pollution Control Board; McKinsey Global Institute analysis

Exhibit E2



Life for the average city dweller in India is tough. Across India, urban citizens have access to only 105 liters per day of portable, piped water supply, as compared to a minimum basic need of 150. Only 63 percent of population has access to sewerage and septic tank facilities, and only 30 percent of sewage generated actually gets treated. This is true even for large cities—Mumbai, for example, treats only30–40 percent of its sewage today. Another key urban pressure point is affordable housing. Nearly 80 million people live in slums across the country. Transportation, too, has deteriorated over the years. Lack of investment in public transportation has resulted in a significant decline in share of public transportation, from nearly 40 percent in 1994 to 30 percent today. Private transportation infrastructure is equally dismal. Peak private vehicular density has already touched 170 vehicles per lane kilometer—50 percent higher than the basic requirement.

ON CURRENT POLICIES, INDIAN CITIES WILL FACE WORSENING DECAY AND GRIDLOCK

As the urban population and its incomes increase in India, demand for every key service will increase many times. This will be true in cities of every size and type across the country. And if India continues to invest in urban infrastructure at its current rate—very low by international comparison—in 20 years' time the urban infrastructure will fall woefully short of what is necessary to sustain prosperous cities. On current trends, India is likely to invest $300 billion in urban infrastructure over the next 20 years, a twofold increase in per capita spending of $17 today. Even with such a large investment program, capacity building in urban India will not come anywhere closet meeting the surging demand for services. For example, peak vehicular densities will likely reach as high as 610 vehicles per lane kilometer. At such densities, an average journey may take up to five hours in peak morning traffic—similar to the acute congestion that disfigures some Latin American cities. Similarly, the per capita water supply could drop from 105 liters today to 65 in 2030.

Exhibit F1

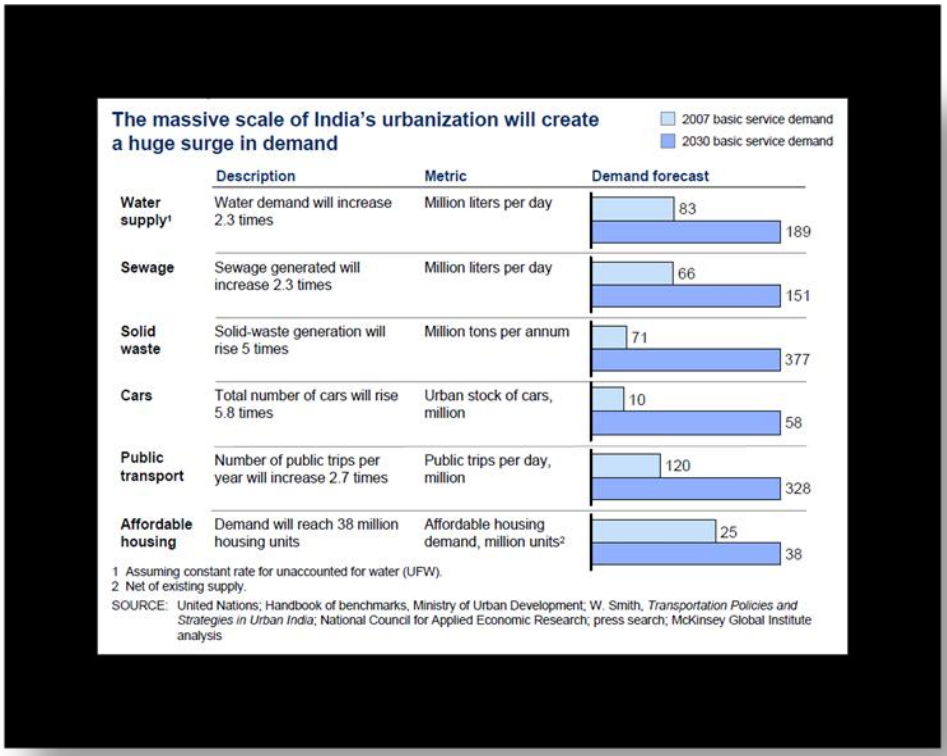
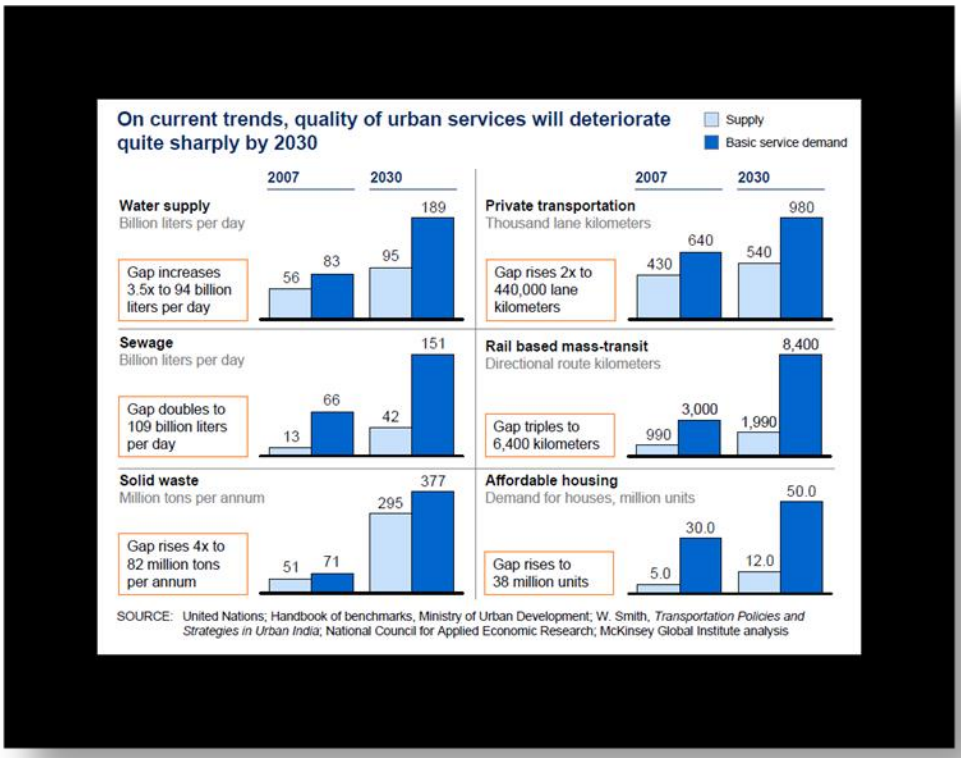

The massive scale of India's urbanization will create a huge surge in demand
2007 basic service demand
2030 basic service demand
Description
Metric
Demand forecast
Water supply[1]
Water demand will increase 2.3 times
Million liters per day
83
189
Sewage
Sewage generated will increase 2.3 times
Million liters per day
66
151
Solid waste
Solid-waste generation will rise 5 times
Million tons per annum
71
377
Cars
Total number of cars will rise 5.8 times
Urban stock of cars, million
10
58
Public transport
Number of public trips per year will increase 2.7 times
Public trips per day, million
120
328
Affordable housing
Demand will reach 38 million housing units
Affordable housing demand, million units[2]
25
38
1 Assuming constant rate for unaccounted for water (UFW).
2 Net of existing supply.
SOURCE: United Nations; Handbook of benchmarks, Ministry of Urban Development; W. Smith, Transportation Policies and Strategies in Urban India; National Council for Applied Economic Research; press search; McKinsey Global Institute analysis

Exhibit F2



We have seen the strains that arise from such unplanned urbanization elsewhere. For example, in many Latin American countries, rapid urbanization without corresponding stepping up of infrastructure construction has led to a steep deterioration in quality of life. Until recently, the metropolitan city of São Paolo, Brazil, with a population of 19 million, had only 38 miles of public rail transportation, which resulted in traffic queues at peak hours that could stretch out for more than 120 miles. More than 60 percent of citizens who moved into the city since the 1980s lived in slums *(favelas)*. Brazil may also have not fully leveraged the economic opportunity of urbanization, unable to generate sufficient jobs to match the movement of people into cities. Unlike in many other countries, the transition to a mostly urban population (e.g., from 50 to 80 percent) was accompanied in Brazil by only a twofold increase in per capita income, compared to double that in other countries. This is a stark warning for India. If India continues with its current unplanned urbanization path, it will result in a sharp deterioration in the quality of life in its cities, putting even today's rates of economic growth at risk (India's Urban Awakening, 2010).

GURGAON and FARIDABAD: AN EXERCISE IN CONTRASTS

Gurgaon and Faridabad border Delhi, one of the higher growth centres of the country. Though, obviously, all cities are different and Gurgaon and Faridabad are quite different in size and character from most cities in India. However, most urban centres have one factor in common. They all have the potential to gain from the opportunities that high growth brings. Between 1999-00 and 2007-08, India's GDP grew at a little above 7.3% and Delhi at 7.4% on an annualized basis.

Gurgaon was widely regarded as an economic wasteland. In 1979, the state of Haryana created Gurgaon by dividing a longstanding political district on the outskirts of New Delhi. One half would revolve around the city of Faridabad, which had an active municipal government, direct rail access to the capital, fertile farmland and a strong industrial base. The other half, Gurgaon, had rocky soil, no local government, no railway link and almost no industrial base.

As an economic competition, it seemed an unfair fight. And it has been: Gurgaon has won, easily. Faridabad has struggled to catch India's modernization wave, while Gurgaon's disadvantages turned out to be advantages, none more important, initially, than the absence of a district wide government, which meant less red tape capable of choking development.

Gurgaon has no publicly provided "functioning citywide sewer or drainage system; reliable electricity or water; public sidewalks, adequate parking, decent roads or any citywide system of public transportation." Yet Gurgaon is a magnet for "India's best-educated, English-speaking young professionals," it has 26 shopping malls, seven golf courses, apartment towers, a sports stadium, five-star hotels and "a futuristic commercial hub called Cyber City [that] houses many of the world's most respected corporations."(Tabarrok, 2011)

Gurgaon has India's third highest per capita income(Bhel, 2009); while Faridabad has failed to capitalize on its early start and is not much different from India's other industrial cities. The reasons behind Gurgaon's late bloom and Faridabad's flop show will be the subject matter of our investigation in what follows.

LAND ACQUISITION IN INDIA

Significant economic reforms have been introduced since 1991 that have resulted in higher rates of GDP growth, with some inter-regional variations. Since economic development is invariably correlated with increased urbanization, there has been greater demand for "urban" land. But constraints have adversely affected the supply of land required for urban growth.

What is relevant is that land is classified as agricultural and non-agricultural, with agricultural equated with rural and non-agricultural equated with urban, though the correspondence is of course not that simple. Most rural land is privately held, while significant urban land is held by the State. In catering to demands for commercialization and urbanization of land, three kinds of issues arise.

First, what is the process of acquiring privately held rural land? In some instances, free private-to-private land transfers are prohibited by the State and land can only be acquired by the State. As fall-outs, there are questions about the compensation paid, the sanctity of contracts, the dispute resolution system, and so on.

Second, once land has been acquired, what is the process of conversion of agricultural land to non-agricultural use? This is discretionary and non-transparent, providing opportunities for rent-seeking.

Third, once land has been converted to non-agricultural use, there is still discretion on the kind of use that can be made of this land. Therefore, land markets are distorted and prevent free land transfers.

Both urbanization and urban planning are constrained.

Consequently India is a country that is under-urbanized in that urbanization levels in India are low, both in comparison with developed countries, and also in comparison with other developing countries. India's rate of growth in urbanization has also slackened over the decades. Apart from the availability of land, several factors determine urbanization: India's positive, high levels of economic growth, decline in the percentage of the work-force employed in agriculture, higher levels of literacy and reduced transaction costs associated with migration, are bound to increase the forces pushing towards greater urbanization.

Building regulations (floor space indices), rent control regulations and land-use restrictions (master plans, zoning regulations) constrain availability of housing, real estate and urban land. Not all available urban land becomes available on the market, creating artificial shortages and inefficiencies in usage. Investments in real estate are deterred. Not all real estate becomes available on the market, creating artificial shortages and inefficiencies in usage. (Debroy & Bhandari, 2009)

The core of land law remains the **Land Acquisition Act of 1894**. This covers acquisition of land for "public purpose" by the government or by a government agency, after paying compensation to individual land-owners. The process of acquisition is important and begins with a preliminary notification. After notification, there is a process of inviting objections and a final award that involves payment of compensation. (Land Acquisition Act 1894)

Many objections centre on the amount paid as compensation and their perceived deviations from market rates. Therefore, quotes from Sections 23 and Section 24 of the Land Acquisition Act are also relevant. Section 23 states,

(1) "In determining the amount of compensation to be awarded for land acquired under this Act, the Court shall take into consideration- first, the market-value of the land at the date of the publication of the notification…; secondly, the damage sustained by the person interested, by reason of the taking of any standing crops trees which may be on the land at the time of the Collector's taking possession thereof; thirdly, the damage (if any) sustained by the person

interested, at the time of the Collector's taking possession of the land, by reason of serving such land from his other land; fourthly, the damage (if any) sustained by the person interested, at the time of the Collector's taking possession of the land, by reason of the acquisition injuriously affecting his other property, movable or immovable, in any other manner, or his earnings; fifthly, in consequence of the acquisition of the land by the Collector, the person interested is compelled to change his residence or place of business, the reasonable expenses (if any) incidental to such change, and sixthly, the damage (if any) bona fide resulting from diminution of the profits of the land between the time of the publication of the declaration … and the time of the Collector's taking possession of the land. …

(2) In addition to the market value of the land as above provided, the Court shall in every case award a sum of thirty per centum on such market value, in consideration of the compulsory nature of the acquisition." Section 24 has the caveat "But the Court shall not take into consideration - first, the degree of urgency which has led to the acquisition; secondly, any disinclination of the person interested to part with the land acquired; thirdly, any damage sustained by him which, if caused by a private person, would not render such person liable to a suit; fourthly, any damage which is likely to be caused to the land acquired, after the date of the publication of the declaration…, by or in consequence of the use to which it will be put; fifthly, any increase to the value of the land acquired likely to accrue from the use to which it will be put when acquired; sixthly, any increase to the value of the other land of the person interested likely to accrue from the use to which the land acquired will be put; seventhly, any outlay or improvements on, or disposal of the land acquired, commenced, made or effected without the sanction of the Collector after the date of the publication of the notification…; eighthly, any increase to the value of the land on account of its being put to any use, which is forbidden by law or opposed to public policy."

The objective of the Urban Land (Ceiling & Regulation Act), 1976, (hereafter **ULCRA**) was to facilitate the availability and affordability of urban land by increasing its supply in the market and by establishing an efficient land market. The ULCRA provided for imposition of a ceiling on both ownership and possession of vacant land; acquisition of excess vacant land by the state government with powers to dispose of the land for the common good; payment of compensation for the acquisition of the excess land; and granting exceptions in respect of certain specific categories of vacant land.

The ULCRA came into force in 1976 in 64 urban agglomerations spread over 17 states and three union territories (UTs) and covered towns with a population of more than two lakh as per the 1971 Census.

The implementation of the ULCRA in the states and UTs was, however, dismal mainly due to:

• Absence of clarity and too much discretionary powers given to the state governments for granting exemptions.

• Compensation provided for the acquired land was very little, which often led to lengthy litigation disputes. The maximum compensation was Rs.10 per sq. meter and the total compensation could not exceed Rs.2 lakhs per owner. This made landowners reluctant to declare their vacant land as surplus.

• Absence of a mechanism to encourage the entry of the vacant urban land into the land market through appropriate fiscal measures. Land prices in cities reached astronomical heights due to artificial scarcity of land created by ULCRA.

Since the ULCRA has not met its intended objectives, the Government of India decided to repeal the Act with the passing of the Urban Land (Ceiling and Regulation) Repeal Act, 1999. Various states subsequently repealed the Act. Haryana, Punjab and the UTs (Union Territories) were the first to repeal ULCRA.(Debroy & Bhandari, 2009) The only states yet to repeal ULCRA are Andhra Pradesh, Assam, Bihar and West Bengal.(Repeal of Urban Land Ceiling and Regulation Act, 1999)

GURGAON: A BACKGROUND TO THE CITY

The antecedents of Gurgaon district go back several thousands of years, since it is believed, reflected in the etymology of the name, that this was a village that was gifted by Yudhishthira to Dronacharya at the time of the *Mahabharata*. Through the Mughal and early British period, Gurgaon remained under minor chiefs and formally came under complete British administration in 1858, with reorganization into five tehsils (Gurgaon, F.P. Jhirka, Nuh, Palwal and Rewari) in 1861. It was also transferred from the North-Western Provinces to Punjab and in 1912, Ballabgarh tehsil was taken from the then Delhi district and included in Gurgaon district. Some more changes took place in 1950 with some areas transferred to Rajasthan and some area gained from the then Pataudi state and PEPSU (Patiala and East Punjab States Union). In 1972, Rewari tehsil was moved to Mahendragarh district. But the most significant change took place in 1979, when Faridabad district was formed and the former Gujarat district lost some of its area. There are now 9 blocks of Tauru, Nuh, Sohna, Gurgaon and Farrukhnagar and depending on how one defines the end-points, Gurgaon city is around 32 km from Delhi. Barring Nuh and Firozpur Jhirka tehsils, the bulk of the population consists of Hindus or Jats of Rajasthani origin. In the 2001 Census, the total population of Gurgaon district was 870,539. Gurgaon city only had a population of 173,542. The district headquarters are in Gurgaon city and other smaller towns are Nuh, Ferozepur Jhirka, Sohna and Pataudi. The point to note is that, especially after the formation of Faridabad, Gurgaon remained predominantly rural, until the last few years.(Debroy & Bhandari, 2009)

Today, Gurgaon is the second largest city in Haryana. It is the state's industrial and financial center. It is located 30 km south of the national capital New Delhi, about 10 km from Dwraka Sub City and 268km south of Chandigarh, the state capital.(Gurgaon District) Gurgaon is one of Delhi's four satellite cities and is a part of the National Capital Region. It is within commuting distance of Delhi via an eight-lane expressway which connects to NH-8 (Delhi-Jaipur-Mumbai National Highway) and the Delhi Metro.

The origins of Gurgaon's recent development owe much to development of real estate, initially residential and then commercial, by DLF and later developers. DLF (originally Delhi Lease and Finance) was established in 1946 and in late 1940s and the early 1950s was involved in building neighborhoods such as like Krishna Nagar, South Extension, Greater Kailash, Kailash Colony and Hauz Khas in Delhi. However, statutorily, the Delhi Development Authority (DDA) came into existence in 1957 and this effectively eliminated the private sector from real estate development in Delhi. The private sector had to look elsewhere, such as in Haryana, and the early expansion began in the second half of the 1970s.

Other than real estate, automobiles, retail and banking, Gurgaon became an out-sourcing and off-shoring hub. The perception of Gurgaon being an IT hub is no true on two counts. First, many out-sourcing and off-services are non-IT and are more likely to be IT enabled services than IT *per se.* Second, quite a bit of manufacturing has moved in and around Gurgaon, Hero Honda and Maruti Udyog being the two most visible. While proximity to Delhi and Indira Gandhi International Airport may explain part of Gurgaon's development, one must remember that rail connectivity is far superior in Faridabad – the largest of Haryana's cities and another satellite to Delhi.

Other facets of the town and the political-economic environment of the region were also reasons for the rise of Gurgaon.

5th August 1979 saw the bifurcation of erstwhile Gurgaon into two districts – the new smaller Gurgaon district and Faridabad district. Geographically the Aravalli hill range separated the two new districts. Faridabad lies between the Aravallis and the Yamuna, one of North India's largest perennial rivers. The land is relatively richer alluvial with a high water table and consistent land sloping from the Aravallis in the West to East towards the Yamuna. In other words, agriculture is far more productive in Faridabad – with relatively richer soil, easy access to water through tube wells and irrigation channels, and good drainage. Consequently the new Faridabad district had more productive and valuable land.

The new Gurgaon on the other hand was not as well endowed. The Aravalis to its east cut off both drainage as well as possibility of water for irrigation from the Yamuna. Sub-surface water remains the primary source of water for agriculture but is brackish, the soil is also not considered as rich.

Not surprisingly the differences between the two districts agriculture are quite stark; Faridabad being far 'richer' than Gurgaon.

THE STORY OF GURGAON

The provisions of the Land Acquisition Act do not apply if the acquisition is completely carried out by a private entity, as opposed to acquisition by the government that is then handed over to a private entity. In other words, if the private entity (say, a construction company) acquires agricultural land at the prevailing agriculture land prices, converts it to non-agriculture purposes with the state government's acquiescence, and obtains the resulting rents for itself, the Land Acquisition Act is irrelevant. This way, private developers could circumvent the procedure laid out by the Act and the caveats in Section 23 and Section 24 also become irrelevant.

Moreover, the ULCRA was repealed in 1999 allowing private developers to acquire land in cities by mutual trade.

Both the Land Acquisition Act and ULCRA inhibit the functioning of free land markets in India in different ways and both were dysfunctional during the land acquisition and growth periods of DLF and other private developers.

Land was more fertile and hence more productive in Faridabad than it was in Gurgaon. This was instrumental in Gurgaon's early growth as it ensured easier access to land (low population density) that was also presumably cheaper (though comparable data on land values are unavailable, the productivity differences were quite pronounced). Moreover, the productivity differences have only widened in the last two and a half decades. Being less productive and less in demand for agricultural purposes, Gurgaon's land was more readily convertible to non-agricultural purposes and government policies allowed this conversion. This didn't happen in Faridabad, where land was relatively more fertile.

Table 4: Gross Value From Agriculture Per Hectare at Current Prices (Rs)

District	80-81	85-86	90-91	95-96	00-01	04-05
Faridabad	4,323	6,382	12,289	22,562	40,613	49,252
Gurgaon	4,141	5,510	11,297	19,254	31,787	36,083
Faridabad as a % of Gurgaon	104%	116%	109%	117%	128%	136%

Source: Statistical Abstract of Haryana 2005-06, Govt. of Haryana.

There are many reasons why productivity differences may have widened. For one, irrigation has improved far more in Faridabad than in Gurgaon; this is only partly a result of its natural advantages.

Table A7: Net Area Under Irrigation '000 Ha

	District	Net Area Under Irrigation	% Irr to Net Sown Area
2004-05	Faridabad	117	79.1
	Gurgaon	90	54.5
1981-82	Faridabad	90	53.6
	Gurgaon	81	40.1

Source: Statistical Abstract of Haryana 2005-06, Govt. of Haryana.

But irrigation is only one component of the story. The government is a large buyer of agricultural commodities, especially cereals. These purchases go to feed the subsidized public distribution system across the country. Typically government purchases are at a higher rate than market prices. Government and quasi government organizations open market purchases of cereals occurred on a large scale in Faridabad, but less so in Gurgaon. The obvious answer is that, given the quality of land, such marketable surpluses were more in Faridabad than in Gurgaon. After all, procurement primarily meant rice and wheat. This would also have impacted relative agricultural land prices in the two districts in favor of Faridabad.

Table A8: Procurement of wheat

District	Year	State Govt	HAFED*
Faridabad	1996-97	30	50
Gurgaon	1996-97	20	20
Faridabad	2005-06	48	59
Gurgaon	2005-06	1.2	2.6
Faridabad	% Growth	61%	18%
Gurgaon	% Growth	-94%	-87%

Note: HAFED: Haryana Agro Marketing Federation, is a state government controlled entity.
Source: Statistical Abstract of Haryana 2005-06, Govt. of Haryana.

The land size distribution was also skewed towards larger plots-sizes in Gurgaon than in Faridabad. In other words, land for non-agricultural purposes was cheaper and larger plots were more available in Gurgaon. To this end, limited growth in irrigation and insignificant government purchases in Gurgaon further added to the value differential in land. Converting agriculture to non-agricultural land was therefore far easier and cheaper for the private construction firms in Gurgaon, and the monetary returns to the entities involved in this were also consequently far higher in Gurgaon.

	1980-81		1980-81	
	Faridabad	Faridabad	Gurgaon	Gurgaon
Size Group (in hectares)	No.	Area	No.	Area
Below 0.5	16091	7024	23110	6648
0.5 to 1	13752	8231	15171	12562
1 to 2	12578	23864	19385	33813
2 to 3	7205	1657	11774	24833
3 to 4	5883	15652	8286	28044
4 to 5	3834	16716	5433	26363
5 to 7.5	3653	19327	5598	39854
7.5 to 10	1516	12821	2447	20261
above 10	*1325*	*20744*	*1868*	*35603*
Total	65837	141036	93072	228041
Average size of holdings		1.91		2.45

Source: Statistical Abstract of Haryana 2005-06, Govt. of Haryana.

Two aspects of infrastructure are especially important in commerce development; these are roads and electricity. By the early eighties it was quite apparent that Faridabad required intensive infrastructure improvements. Its large manufacturing sector required a well spread and maintained road infrastructure, and also required a well spread power network. However, where non rural infrastructure investments are concerned we find that the majority of growth occurred in Gurgaon rather than in Faridabad. Why might this be the case? Since a large economically active base already existed in Faridabad, the state government could have generated greater economic returns with greater investments in Faridabad. Both electricity and roads are controlled by the state government and therefore the direction is not provided through the market or through any other institution. Instead, priorities related to investment in infrastructure are decided by the state government through its various arms. However, the trigger for road development was a Central government initiative through the National Highway Development Programme (NHDP), which upgraded

national highways, under the purview of the Centre. State highways, under the purview of State governments, were upgraded later and were not part of the NHDP. NH (National Highway) 8 passes through Gurgaon and goes on to Jaipur. NH-2 passes through Faridabad and goes on to Mathura. However, up gradation of national highways also requires land acquisition and conversion. Consequently, Gurgaon gained at Faridabad's expense. Conversely, Faridabad is on a railway network, while Gurgaon isn't. But unlike reforms in the road sector, there were no reforms that improved the railway network. As for electricity, reforms stagnated in both Gurgaon and Faridabad, since the issue wasn't just generation or transmission, but distribution too.

District	Year	Low Tension lines (Circuit km.)	11 KV. Lines (Circuit km.)	No. of transformers
Faridabad	1996-97	7123	3022	6065
Gurgaon	1996-97	8340	3106	4948
Faridabad	2005-06	9244	3736	8417
Gurgaon	2005-06	10400	4737	7874
Faridabad	% Growth	30%	24%	39%
Gurgaon	% Growth	25%	53%	59%

Source : State Electricity Board, Haryana; earlier data are not available

District	1979-80	2005-06	% Growth
Faridabad	943	1172	24%
Gurgaon	1241	1635	32%

Source: Statistical Abstract of Haryana 2005-06, Govt. of Haryana.

Indian economic reforms started in the mid-eighties and gathered momentum in the early nineties. The bulk of Faridabad's manufacturing base developed before this period. In line with the overall economic structure of India during that period, the large industrial base of Faridabad produced for a domestically – oriented market. High import tariffs and various benefits for small scale and import substituting units supported this manufacturing base. Further entry and production in most manufacturing sector were controlled through an elaborate licensing regime. The 1990s reforms led to de-licensing of most manufacturing, open entry both for domestic and international firms, rapid lowering of import tariffs, depreciation of the rupee, reduced subsidies and benefits to the manufacturing sector in general. This led to a range of negative shocks to the manufacturing sector in India in general and Faridabad's in particular. Thus through much of the 1990s Faridabad's manufacturing sector was not among the city's most dynamic sectors.

Sectoral dynamics constitute another aspect of Faridabad – Gurgaon story, for the simple reason that the slowdown in the manufacturing sector growth affected Faridabad's industrial lobby's ability to push for greater investment and focus towards Faridabad both within Haryana and at the national level in Delhi. Meanwhile the rapid growth of the service sector, the entry of MNCs, and the rapid rise of export oriented Information Technology (IT) and IT enabled services (such as business process outsourcing) required large floor spaces which the large private entities were willing to supply in Gurgaon. Moreover, the proximity of Gurgaon to the international airport also supported the growth of export oriented units such as in the garments sector.

It is apparent; Gurgaon with its newer infrastructure, and active state government support, along its greater and more pro-active actions of the private sector construction companies was able to attract a far richer set of corporate entities. Let us make the argument more explicit. Agricultural land was easier to acquire in Gurgaon than in Faridabad. The land was acquired not only by private sector construction companies, but also (it is claimed by many though not confirmed) by the political class, which had some inherited in Gurgaon as well. This land now needed to be converted into non-agricultural use. And since the political class was also (as claimed) a beneficiary from this conversion, with higher sale values resulting, the conversion was readily done in Gurgaon. The interests tended to or were made to coincide. Perhaps it is worth mentioning that private sector companies such as DLF did purchase land in Faridabad as well. However, since

conversion didn't occur, that land was eventually sold out, the key difference being that the political class owned little land in Faridabad. (Singh, 2012)

One further strand needs to be added to complete the story. Haryana was the first state in India that allowed the entry of private developers in real estate. In that sense, the Haryana Urban Development Authority (HUDA) policies were uniform across both Gurgaon and Faridabad. However, the so-called third tier of government: urban local bodies (ULBs) were missing in Gurgaon. Gurgaon only had a municipal committee, not a municipal corporation, since it was below the relevant population threshold. Had there been a municipal corporation, as was the case in Faridabad, there would have been yet another tier of government, with possible countervailing checks on arbitrary conversion of village land to urban areas. The participation of the urban local body would have been mandatory. Since there was no such tier of government in Gurgaon, the decisions of the Chief Minister's office alone were sufficient. The democratic process didn't exist.

Significantly the bifurcation of the Gurgaon district in 1979 led to a situation where there was a strong local government in Faridabad – Municipal Corporation of Faridabad, but there was no such entity in Gurgaon (The Municipal Corporation of Gurgaon has been constituted in 2009(website). Hence all of land conversion and development related issues were highly centralized for Gurgaon, controlled directly by the CM's office, but Faridabad had a more complex environment. Given this centralization, it was possible for the state government to take measures highly specific for Gurgaon. This centralization ensured that decisions could be taken and implemented rapidly. In such a situation if gains from land conversion are concentrated in the hands of a few (large businesses and/or land owners) it would be easier for them to synergize the incentives of the political class with their own. Of course in the process sub-optimal decisions can be taken, urban planning can be given short shift.

But democratic institutions, even at the local level, have their own dynamic. Procedures take time, many voices need to be heard, and idiosyncratic decisions cannot be taken easily.

As per the 12th Schedule of the 74th Constitutional Amendment Act of India the Urban Local Bodies have 18 tasks under their functional domain. These are:

1. Urban planning, including town planning.

2. Regulation of land use and construction of buildings

3. Planning for economic and social development

4. Roads and bridges

5. Water supply for domestic, industrial and commercial purposes

6. Public health, sanitation conservancy and solid waste management

7. Fire services

8. Urban forestry, protection of environment and promotion of ecological aspects

9. Safeguarding the interests of weaker sections of society, including the disabled and mentally retarded

10. Slum improvement and upgrading

11. Urban poverty alleviation

12. Provision of urban amenities and facilities such as parks, gardens and playgrounds.

13. Promotion of cultural, educational, and aesthetic aspects.

14. Burials and burial grounds, cremations, cremation grounds, and electric crematoriums

15. Cattle pounds; prevention of cruelty to animals

16. Vital statistics including registration of births and deaths

17. Public amenities including street lighting, parking lots, bus stops, and public conveniences.

18. Regulation of slaughter houses and tanneries

Decentralization to ULBs circumscribes the powers of the state government; the ULBs can affect state government plans in many different ways. The first is through putting in rules and procedures related to various permissions to be granted. Apart from town planning, these can be the in the realm of environmental clearances, identification of priority areas for infrastructure development, etc. in line with the powers delineated by the Constitution. The second route is more political, strong local politicians can directly or indirectly affect state government plans. And the third is simply the inefficiency route. Local governments typically are quite slow and inefficient in granting the required permissions. Again, by design, Gurgaon was spared all of this, but not Faridabad.

In Gurgaon therefore the local government did not impact road building, water supply and sanitation, street lighting, parks etc. Rather private builders who had purchased and controlled large tracts of land in Gurgaon were to be responsible for their own areas, and this was supplemented by the efforts of the state government.(Debroy & Bhandari, 2009)

DLF CITY: A FREE CITY?

The DLF City is privately developed, and primarily a privately operated community. DLF City homeowners are unknowingly demonstrating just how far privatization can go. The DLF City resides thousands of people in more than a dozen planned communities by DLF consisting of apartments, single family homes, big bungalows, shopping centers and office buildings. These communities are spread across acres.

Whatever the particulars of a given community, the City has three common traits: building and land use restrictions, shared amenities, and community associations to which all property owners belong.

Within their enclaves these associations perform all the functions of a small government. The associations work to assure that the communities' amenities, public facilities and other areas are supported and maintained. In essence, they are a combination public works/parks and recreation department. Funding usually comes from maintenance fees assessed on each property owner.

Perhaps the most important function of the community association, called the Resident Welfare Associations (RWAs) is enforcing deed restrictions. Deed restrictions are a form of private "zoning," in which developers establish certain rules to prevent undesirable buildings and land use. Like zoning, deed restrictions provide continuity within a given area; unlike zoning, deed restrictions are governed by market considerations.

When private developers are developing a master-planned community they essentially try to make it so the homeowner doesn't have to leave the area to get what he wants. This requires a careful marketing study to determine the amenities homeowners want. Retail shops, grocery and convenience stores, doctors, dentists, animal clinics, and other frequently visited businesses are often located within the community.

Business areas are separated by the community's major roads. . Business areas are located along these thoroughfares, which helps keep cars essentially out of the residential areas. In planning the communities, DLF has worked closely with the business community to construct a plan which benefits businesses and future homeowners. This does not mean that businesses dictate the community's plan. Fast food chains are not allowed in several locations in the community. The locations sought by the chains would draw excessive traffic and disrupt the master plan. Because DLF must be concerned with the long-term economic success of their projects, such considerations are essential.

The extensive planning by DLF offers an alternative to another end central city planning seeks to meet: protection of the environment. Parks, greenbelts, jogging trails, and wooded areas can be found in nearly every planned community. This is how it enhances the values of a project by working with, not against, nature. Some projects have gone so far as to operate golf courses within their communities.

While these facilities are generally built by the developer, the homeowners association eventually assumes control and maintenance responsibilities. Some facilities, such as golf courses and health clubs, are operated by private businesses, and require membership fees. But all of these recreational facilities are provided by the private sector, replacing the parks and recreation departments found in most cities.

Just as city governments organize sports leagues to use municipal parks, homeowners associations sponsor activities to utilize the community's facilities. Holi, Dussehra, Lohri, Diwali and other celebrations take place at the community level and are organized at the RWA or smaller community level.

Security: DLF Cyber City is secured by a 3 Tier security management system. This includes a round the clock monitoring of the Cyber city periphery (Tier 1), the building complex entry (Tier 2) and inside the building (Tier 3). Over 12,000 CCTV cameras and over 1200 security personnel, a team of building managers, security supervisors, armed security guards, metal detector machines, a central disaster management and control room and walkie talkies come together every day and every night, to keep DLF Cyber city incident free.(Gatefold : Feel secured, 2013)

Fire Protection: DLF is the first private developer to procure 90 meters high Snorkel/Sky lifts for DLF Cyber City Gurgaon, while the reach of fire departments tender are only 40 meters. The Snorkel can reach up to 30 floors plus additional 35 meters can be reached by water jet. Additionally, they have the following facilities:

- Thermal Imaging Cameras
- DMDRP – Disaster Management and Disaster Recovery Room
- Removal of Gas Banks from buildings – Only piped gas supply
- Breathing Apparatus systems – 10 nos. at any point in time.
- Smoke generators used in mock drills
- 2 Tier fire sprinkler system at all tenant areas
- Fireman proximity suits & Fire Entry Suits
- Exclusive training centers for tenants for fire-fighting
- 3rd party fire safety audit
- Helipad for emergencies

Two fire stations are going to be made operational by DLF in Gurgaon, one in Phase 3, DLF Cyber City and another one in DLF Phase 5. The response time is going to be less than three minutes from the fire stations, in response to any emergencies. The staff attached to the Snorkel will be trained by the sourcing company along with the periodical maintenance.(India Awakes, 2012)

Transport: - DLF Ltd and Haryana Urban Development Authority (HUDA) have announced commencement of work for the 16- lane, 8.3 km road network in Gurgaon. This public-private partnership is a culmination of years of planning, with the basic objective of creating sustainable infrastructure facility extending from NH-8 Toll Plaza to Sector 55\56, in Gurgaon. This corridor will also be signal free providing free movement for commuters on either side and will feature 6 underpasses that will not only reduce noise pollution but will also prevent public inconvenience. There is also a dedicated corridor for sector 25 to sectors 55 & 56 which will mitigate traffic conflict and thereby enable smooth flow of main traffic. The road is seamlessly integrated into the urban infrastructure which comprises of sewerage, drainage systems and other utilities making it an integral part of the urban system.(DLF, 2012)

Moreover, the Rapid Metro, a private metro rail service is being built by a joint venture of IL&FS and DLF Metro. The route planned will connect the Delhi Metro station at Sikanderpur and will act as the feeder of the Delhi Metro Central Secretariat – Gurgaon Line.. Delhi Metro and Metro Link Gurgaon will be connected through a 90 meters long and 9 meter wide bridge. Skywalks are planned from inside office complexes to allow office goers to take the Metro without having left the office premises. (Foundation Stoone laid for Gurgaon Metro Rail, 2009)

SmartRide is another initiative supported *by DLF and Millennium City Welfare Society* to help decongest the city by creating shared transport services connecting the Metro to office hubs. Launched in November 2010, SmartRide aims to provide a safe and reliable service with features like air conditioned environment, demarcated routes, access with ID, internet subscription and professional handling. Buses are operational during peak morning and evening hours with frequency varying between 6 minutes to 30 minutes, depending on the length of the journey. Hari Kaushik, CEO, SmartRide has said that the service could start soon with RWAs of various residential societies coming forward to ink deals. DLF City RWA is a case in point with whose support the SmartRide has already started functioning in DLF Phase I.

The service can be availed of by anyone by becoming a member of Cyber City Commuters Society. For Cyber City office-goers, the fare to the Metro station could be anywhere between Rs 14 and Rs 25 depending on the type of packages they use. As for DLF residents the fare for a single ride is Rs 25.(Ghosal, 2012)

Power: DLF has implemented the Co-Generation Technology Concept to set up a 100 MW captive power plant in its DLF Cyber city premises to provide uninterrupted power supply to 7 office buildings in the area. The gas-fired plant cost DLF around Rs 400 crore and generates power at around Rs 4 a unit.(Bhaskar, 2006) The residential colonies receive electricity from the state owned Distribution Company – Dakshin Haryana Bijli Vitran Nigam Company. This however is fraught with disruptions and house owners have to use either inverters, diesel generators or community owned generators to make up for the shortfall.

DLF did not require a license to distribute power in the cyber city because what they have is a 'captive' power plant which satisfies their private needs and does not distribute power as a business. They were however taken to court on this issue by DHBVNL and have been made to pay penalties due to loss of revenue to the state company.(DLF Vs DHBVNL, 2011)(DLF Vs DHBVNL, 2012)

Schools in DLF City: EuroKids, DLF Phase 2; Sri Ram High School, DLF Phase 3; Ida Pre School, DLF Phase 3; Kumon; Summer Fields School, DLF Phase 1; Shiksha schools for the underprivileged among others.

Water and Maintenance: Water distribution, residential housing security and general community maintenance is provided by DLF for an annual maintenance charge of around Rs.8,000 – Rs. 10,000. Conservation of water by using recycled water by installation of Sewage Treatment Plants is under construction.

In Cyber City and DLF Phase V, Sewage Treatment Plants of 7MLD (Million liters per day) and 9MLD respectively are already functional and are saving 11 MLD of water. By May 2012 the saving of water from the two STPs shall increase to 17KLD. Plans are also in place for recharging the soil with water by installing one Rain Water Harvesting well per acre of project area(January, 2012)(Sethi, 2012).A major initiative underway is the construction of a 900KL underground tank in Phase 3 which will meet the needs of elevated areas in the Phase 3. This initiative will go a long way in meeting the needs of citizens in this area.(February 2012)

Because of the high density of homes in DLF City, it makes an attractive target for the Municipal Corporation seeking to expand its tax base through annexation. Generally, when this happens, most services—water, fire protection, garbage pick-up, etc.—are then provided by the municipality. In the process, homeowners lose autonomy and the accompanying benefits. Same is feared by the residents of the DLF City.

Some services, such as electricity, are provided by the public sector in all of the private colonies. Many communities in later years rely on the police department for security. And road maintenance, after certain requirements are met, generally becomes the responsibility of HUDA. But this does not detract from the broader lesson to be learned from master-planned communities; the private sector can and does provide nearly all services traditionally assigned to city governments. While opponents of privatization are arguing that only government can provide certain services—parks

and recreation facilities, land use controls, trash pick-up, fire protection—private developers are busily proving otherwise.

LEARNINGS FROM JAMSHEDPUR

“Nature provides exceptions to every rule.”

- Margaret Fuller

This is one way critics can rubbish the good work that the private sector is delivering Gurgaon’s public domain. Gurgaon was one example where services are provided not because, but despite the government; it is not the only one in India. The citizens of Jamshedpur don't want their town to be run democratically. In fact, had a referendum been held, they would have long ago vetoed the very idea of a municipal corporation to run their city.

It may sound like a paradox, but when the Jharkhand government issued a notification asking for objections and suggestions for a municipal corporation to run Jamshedpur recently, six lakh people signed a memorandum against its formation.(Jamshedpur citizens do not want Municipal Corporation, 2006) In itself a huge number; it becomes gargantuan when you realize that the number of people likely to be affected by the decision was 10 lakh, of which a sizeable proportion was children, who were not eligible to vote.

Why don't Jamshedpur's people want a municipal corporation? Because they trust Jusco to take care of their civic services. Clean and smooth roads, blossoming tall trees and greenery all around, uninterrupted water and power supply, and a 24x7 helpline — Jusco Sahyog — to take care of grievances if any, are just some of the reasons that people have so much confidence in its services.

Jusco was formed in August 2003, by hiving off the Town Division of Tata Steel, which had been providing municipal services to the township since it was set up in 1907. Today, Jusco does more than just provide municipal services within the 14,000 acre area of the township. Its services include water and wastewater management, power supply, public health and horticulture services, as well as planning, engineering and construction with which it caters to a population of about 0.70 million, of which only 20,000 are Tata employees.

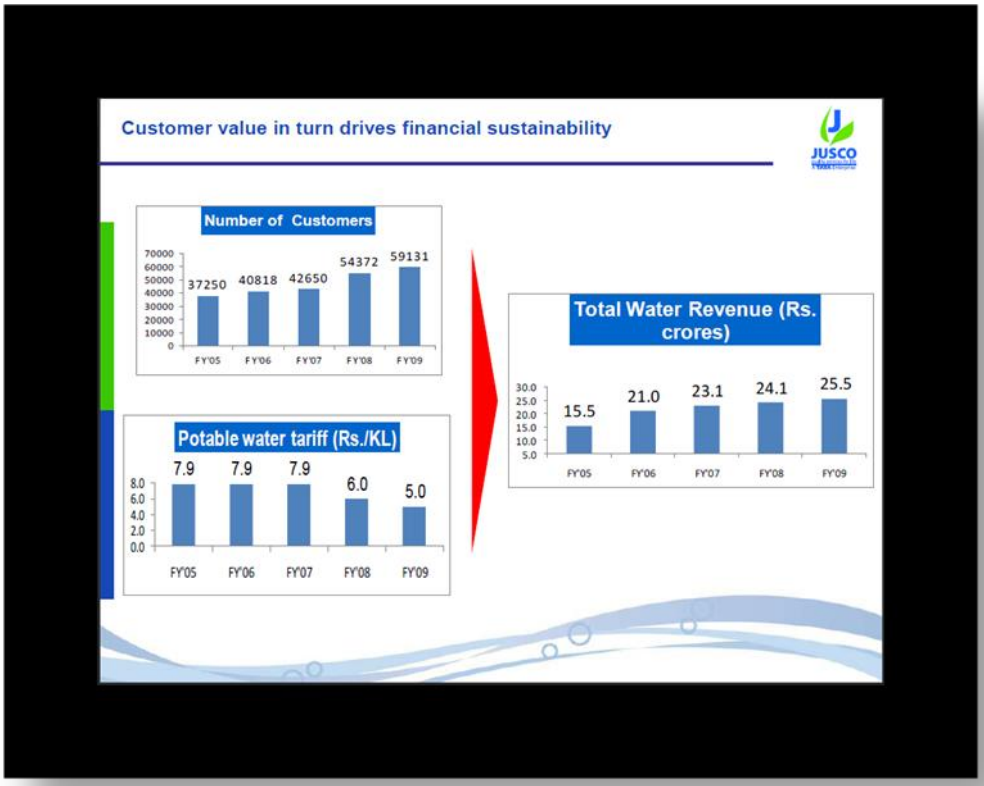
The water supplied and the effluents discharged confirm to Bureau of Indian Standards (BIS) and World Health Organization (WHO) norms.(Asia) Jamshedpur is among the cleanest and greenest cities in India, and the company has received the environment management system (EMS) ISO certification (ISO 14001) for adhering to international standards in maintaining the township, making Jamshedpur the first such city in India.(Jamshedpur first ISO14001 city in the country, 2003) It is also the only city in South East Asia to be selected by the United Nations to participate in its Global Compact Cities Pilot Programme.(The Jamshedpur Story)

Impact of Corporatisation

Parameter	Unit	2005	2010
Coverage, Metering and NRW Reduction			
Population covered	*% of Total*	67%	**85%**
Connections	*Nos.*	35,000 +	**60,000 +**
Water Consumption	MLD	215	**322**
Metered Connections	% of Total connections	Neg.	**30 %**
Non Revenue Water	%	36%	**9.5%**
Water Quality conformance			
Bacteriological quality	*% of samples*	93%	**100 %**
Free Chlorine level	*% of samples*	86%	**99.7 %**
Customer Focus			
Index value	*Score – Max 5*	3.75 (2004)	**4.2**
Service Guarantee Compliance	% of total	77%	**99%**
Repeat Complaints	% of total	3.2%	**0.03%**
Water Treatment – Closing the loop			
Sewage Network Coverage	% of population	57%	**72%**
System Improvements			
Failures in water systems	Nos. Per month	44	**1.1**
Energy Consumption	KWH / MLD	332	**274**
Financial Management and Human Resources			
Operating Ratio	*Op. Cost/Revenue*	1.07	**0.82**
Staff / 1000 connections	nos.	> 8	**4.03**

(JUSCO)

As compared to the national average of 125 litres per person per day, water consumption in Jamshedpur is 261 litres per person per day. The same figure for Delhi is 100 litres; for Mumbai, 200. (Chattoraj, 2006)JUSCO estimates that water distribution facilities across India which have been functioning for more than 25 years have unaccounted for Water (UFW) levels exceeding 50%. Basically, this means that 50 per cent of the volume of water collected from source (river, wells etc) and subsequently treated at treatment plants leaks out on its way to customers' taps or is stolen and not paid for. JUSCO has taken an UFW monitoring program through systematic electromagnetic bulk metering at various points of its distribution network spanning more than 500 KMs. Constant monitoring of JUSCO's rising mains through electromagnetic bulk meters indicated that major losses existed in the system. To identify the precise location of these losses, certain sections were prioritized and surveyed for any visible leakages and unknown connection. Once these leaks were visible, the exact location of the pipelines was identified with the help of Electronic Pipe Locators and the Ground Penetrating Radar. These leakages were then immediately repaired. The drive to constantly reduce UFW levels followed JUSCO's realization that every kiloliter (KL) of water lost results in huge revenue losses for the company. Given that the total potable water production is 180 MLD, even a 1 percent reduction in UFW per day amounts to a saving of 1,800 KLper day, which translates to a saving of Rs 4.25 lakh (US$9,444) permonth.13 This 'saved' water could then be redistributed to service areas that are not receiving adequate water supply. Thus, JUSCO now has a penetration level of more than 85% in its service area and costs of water per liter have been consistently falling.(Asia)



(JUSCO)

Intra-urban disparity, insufficient quantity and poor quality of water supply, and the lack of attention to rationalisation of tariff have emerged as some of the major challenges of urban water supply in India. When the average access to drinking water is highest in Class-I town (73 per cent), followed by Class II (63 per cent), and Class III (61 per cent); in 84 per cent of the notified slums the main water source is through public stand posts for only few hours of the day.

The irregular and insufficient service also has harmful health implications on the people. According to World Health Organisation's primary health requirement, sufficient water supply means 40 litres per capita per day (lpcd), which is far from reality in Indian slums. Moreover, the quality of water supply has also been hampered by high numbers of contaminations and excessive presence of iron, fluoride, salinity, nitrate, arsenic in water. High diarrhea prevalence, a common cause of death in developing countries and the second most common cause of infant deaths worldwide, can directly be attributed to contaminated water consumption.

Initially JUSCO was providing drinking water to these *bagan(slum)*areas through 550 public standposts. In few places bore wells and hand pumps were also set up to reach out to the poor. Further to address the growing demand made by the residents to improve the quality of water supply JUSCO started a unique initiative of connecting bagan areas to the water supply network. The pilot initiative was launched in Uliyan and Bhatia areas covering approximately 2.5 square km and a population of 28, 050. After successfully assessing the consumer demand, and the technological and financial feasibility of the pilot project, JUSCO scaled up its initiative to other existing slum settlements. The areas covered under the second phase are Ramdeo Bagan, Laxmi Nagar, Teacher's Colony and Vidyapati Nagar. Including the pilot, a total of 7,088 connects were set up by the end of the second phase.JUSCO initiated the back-end investment on its own to cover the enhancement of treatment and pumping capacity. In addition, efforts were made to create channels to the nearest water tower at the target site. Tariff is charged on the basis of consumption and to enable demand management and water conservation. The success of this venture also encouraged JUSCO to replicate this model across other low-income parts of the city.The residents of the slum settlements formed a committee, the Bagan Area Vikas Samiti, to voice their

preference for the city to be an industrial township rather than a municipal corporation.(Water Supply for Informal Settlements)

Tata Steel employees are provided water for free; others have to pay a minimum of Rs 120 per month. Water charges are determined on the basis of the size of the plot and the number of floors in the particular building.(Chattoraj, 2006) For 24 hours water supply, the tariff was between Rs. 1000 to Rs 1200.(Asia)

There are two modern sewage treatment plants for treatment of waste water. These have ten pumping stations of 65 million litres a day (MLD) combined capacity; and a network of 550 kilometres. Jamshedpur remains the sole city in India where 100% of the sewage is collected and treated before disposal. Street drains are cleaned daily using modern machinery, such as the sewer line cleaning machine.(Chattoraj, 2006)

Uninterrupted availability of power in Jamshedpur is as high as 99.42%, which compares favourably with Mumbai, the commercial capital of the country. The per capita power consumption (measured inKWH) per year of Jamshedpur is much higher than the national average. The former is 650 KWH, whereas the latter is merely 450. The comparison becomes even starker when one finds that the per capita power consumption of the state of Jharkhand, in which Jamshedpur is located, is only 220 KWH.

A comparison of the monthly power bill for 500 units of power consumed in various cities of India reveals that the domestic tariff for power supply in Jamshedpur is also one of the lowest in the country. In Delhi, this bill comes to Rs 1890; in Kolkata it is Rs 1548; in Mumbai, Rs 1305; and in Jamshedpur the electricity bill for 500 units comes to Rs 1290.(Chattoraj, 2006)

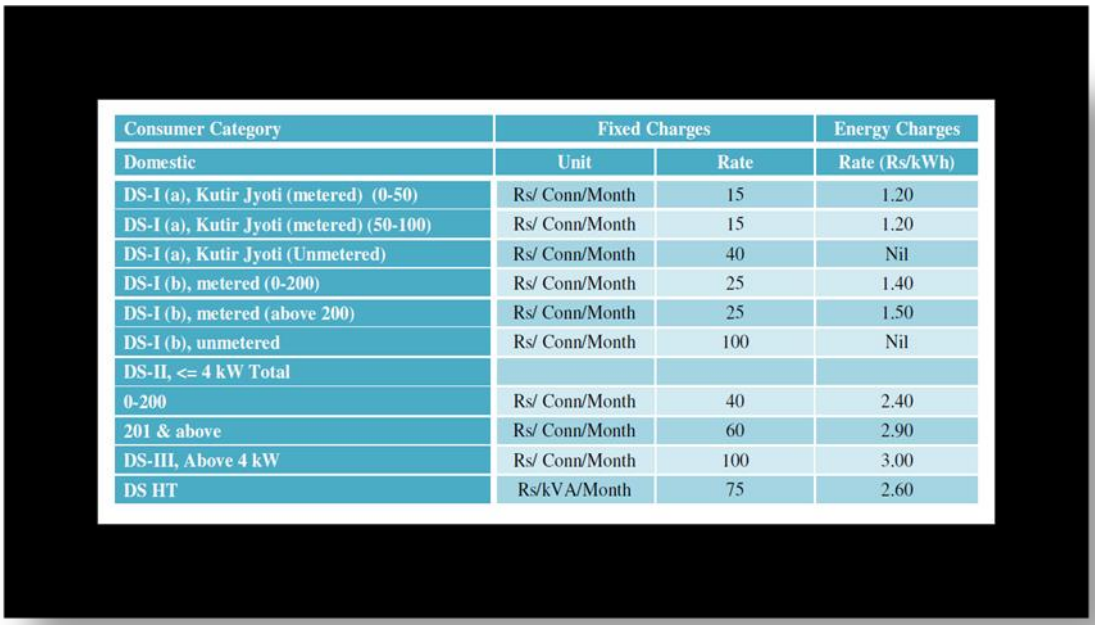
Seraikela in Jharkhand is the only place in India where two distribution companies have laid parallel lines for power distribution.(Seraikela Kharsawan License Area) The household power tariffs for the two providers are given below, with JUSCO providing the services at a much lower price.

JUSCO's tariffs:

Consumer Category	Fixed Charges		Energy Charges
Domestic	Unit	Rate	Rate (Rs/kWh)
DS-I (a), Kutir Jyoti (metered) (0-50)	Rs/ Conn/Month	Nil	1.10
DS-I (a), Kutir Jyoti (metered) (50-100)	Rs/ Conn/Month	Nil	1.10
DS-I (a), Kutir Jyoti (Unmetered)	Rs/ Conn/Month	30	Nil
DS-I (b), metered (0-200)	Rs/ Conn/Month	Nil	1.10
DS-I (b), metered (above 200)	Rs/ Conn/Month	Nil	1.10
DS-I (b), unmetered	Rs/ Conn/Month	72	Nil
DS-II, <= 4KW			
0-200	Rs/ Conn/Month	25	1.50
201 & above	Rs/ Conn/Month	30	1.90
DS-III, Above 4 KW	Rs/ Conn/Month	50	1.90
DS HT	Rs/KVA/Month	40	1.65
UMDF – Predominantly Domestic*	Nil	Nil	Nil

(JSERC)

Jharkhand State Electricity Board's Tariffs:



Consumer Category	Fixed Charges		Energy Charges
Domestic	Unit	Rate	Rate (Rs/kWh)
DS-I (a), Kutir Jyoti (metered) (0-50)	Rs/ Conn/Month	15	1.20
DS-I (a), Kutir Jyoti (metered) (50-100)	Rs/ Conn/Month	15	1.20
DS-I (a), Kutir Jyoti (Unmetered)	Rs/ Conn/Month	40	Nil
DS-I (b), metered (0-200)	Rs/ Conn/Month	25	1.40
DS-I (b), metered (above 200)	Rs/ Conn/Month	25	1.50
DS-I (b), unmetered	Rs/ Conn/Month	100	Nil
DS-II, <= 4 kW Total			
0-200	Rs/ Conn/Month	40	2.40
201 & above	Rs/ Conn/Month	60	2.90
DS-III, Above 4 kW	Rs/ Conn/Month	100	3.00
DS HT	Rs/kVA/Month	75	2.60

(JSERC)

With an area of 64 square kilometres, Jamshedpur has a total road length of 524 kilometres (JUSCO, June 2006). In the year 2005, JUSCO has widened 4.5 kilometres of roads and constructed 8.7 kilometres of new roads (JUSCO, January 2006). Resurfacing of roads is done with recycling material. By November 30, 2012, JUSCO had successfully constructed a road of approximately

900 Sq mtrs using plastic waste.(Jamshedpur Utility Services and Company Adopts Innovative Approach To Tackling Plastic Menace, 2012) JUSCO also promotes use of eco-friendly steel intensive structure. JUSCO conceives plans and develops architectural and civil engineering projects, keeping in mind the wholesome development of the town. There is hardly any unplanned growth. It builds a variety of buildings used for as different purposes as flats, bungalows, hostels, schools, hospitals and institutes. It even maintains the Keenan Stadium, the cricket stadium in Jamshedpur. JUSCO has recently entered into a partnership with Minaean Building Solutions Incorporated, Canada, to construct steel-intensive housing structures. This is said to be extremely cost-effective as well as reliable.(Chattoraj, 2006)

JUSCO has an efficient system in place for handling and disposal of Municipal Solid Waste and bio-medical waste, as per the provisions of Municipal Solid Waste and Bio-Medical Waste (Management and Handling Rules) 2000. There are 3.15 collection points for MSW per thousand persons, as compared to only 1.91 in Mumbai and 2.75 in Chennai. This waste is disposed of at pre-designated dump areas (see graph below). This service covers the entire 64 square kilometres of Jamshedpur, catering to approximately 22, 000 residential houses and a population of 7 lac21.

Ten percent of this waste is recycled. A useful comparison could be with the UK, where15.6% of the waste is recycled22. Other services provided by this department include reduction and eventual elimination of mosquito breeding sites, immunization against communicable and other diseases, and the development of the green cover of the city, sweeping through the use of flippers, micro-organism and odour removal. Every year, about 1.25 lac tons of garbage is removed from the city. JUSCO claims over 98%compliance to garbage removal schedules.

JUSCO Sahyog Kendra is a single window complaint lodging and follow-up system that caters to 22, 000 homes and 300 offices -a total of 1, 10, 000 people. Six centres are linked online with a single point customer helpdesk; which provides

24X7 services26. Earlier, complaints had to be lodged through 15 different numbers. This service undertakes maintenance of buildings, their renovation, modificationas well as alteration. It also deals with complaints about water supply, power services and all other services provided by JUSCO.

A customer is required to identify oneself by a customer ID, phone number, and one's location. The location is mapped through GIS to the appropriate consumer complaint zone. Then the customer gives the details and the code of the complaint. The time taken to register a complaint is a maximum of 90 seconds. The customer is given a complaint reference number to check on its status and a Service Level Guarantee (SLG) that is the maximum time expected for the redressal of the complaint. The Kendra then registers this complaint in its central database and sends it to the concerned department for consideration. At the same time, a job card is printed at the relevant zone and sent to the employee/ contractor to who the job is allocated. Upon redressal of the complaint, the customer must fill the job card and sign it along with the employee/ contractor, who must then submit it to the department responsible. The effectiveness of this system is monitored by the JUSCO Sahyog Kendra by calling up a random selection of about 100 customers daily to get feedback as to whether the complaint was addressed promptly and to their satisfaction. Some other municipal services provided are a college, public health services and other hospitality and fleet management services like guest houses, road vehicles and heavy equipment.(Chattoraj, 2006)

FREE CITIES OR CHARTER CITIES

In too many places, weak or outdated rules hold people back. Some rules limit the firms that can sell power, so electricity is expensive. Others fail to adequately contain crime. Others make it unusually difficult to start a business or open a plant. Because of this, firms build new factories not in places where the need for work is highest, but in places where electricity is inexpensive, property and people are safe, and doing business is relatively easy. The few workers who manage to migrate from places with inefficient rules to places with better rules end up earning wages that are many times higher than what they can earn in the places they leave behind. Though better rules should be easy to replicate, experience shows that existing social systems at all scales, from firms to cities to nations, have great difficulty achieving the consensus that is required to force change on all members. In this setting, competition between different social organizations—organizations that attract new members by implementing better rules—can be a powerful source of progress.

The world's poor know that better rules prevail elsewhere. Gallup reports that 630 million people would like to move permanently to another country. If they could, even more would surely follow, but they cannot because voters in the countries where they want to go, the countries with the best rules, will not let them in.

A Free City or a Charter City is a new type of special reform zone. It extends the concept of a special economic zone by increasing its size and expanding the scope of its reforms. It must be large enough to accommodate a city with millions of workers and residents. It could have just a few differences; for example it could decide to have different tax rates. Or it could be completely separate, having its own government, police force, courts and military, having completely different laws, currency and foreign policies. Or it could be somewhere between these extremes.

Its reforms must extend to all the rules needed to support exchange in a modern market economy and structure interactions in a well-run city.

The concept allows for cross-national government partnerships that facilitate the transfer of working systems of rules to Greenfield locations. By adhering strictly to two key principles — that the new rules apply only to people who choose to live under them and that they apply equally to all residents — rules can be copied from elsewhere and still achieve a high degree of local legitimacy.

Rules that are known to work well can be transferred to a new charter city in part through the assistance of a partner country. As a result, the formal rules in a charter city, and the norms that these rules encourage, can differ markedly from the ones that prevail nearby. These rules can nevertheless be legitimate in the eyes of the migrants to the zone, just as the rules in a more developed country can be legitimate in the eyes of the migrants who would like to move there. Experience shows that this legitimacy comes from the combination of a decision by a new resident to opt-in to new rules and the social inclusion that follows from equal application of the rules to all residents.

Charter City Structure

The concept is very flexible, but all charter cities should share these four elements:

1. A vacant piece of land, large enough for an entire city.
2. A charter that specifies in advance the broad rules that will apply there.
3. A commitment to choice, backed by voluntary entry and free exit for all residents.
4. A commitment to the equal application of all rules to all residents.

The broad commitment to choice means that no person, employer, investor, or country can be coerced into participating. Only a country that wants to create a new charter city will contribute the land to build one. Only people who make an affirmative decision to move to the new city will live under its rules. They will stay only if its rules are as good as those offered by competing cities.

A charter should describe the process whereby the detailed rules and regulations will be established and enforced in a city. It should provide a foundation for a legal system that will let the city grow and prosper. This legal system, possibly backed by the credibility of a partner country, will be particularly important in the early years of the city's development, when private investors finance most of the required urban infrastructure.

There are three distinct roles for participating nations: host, source, and guarantor. The host country provides the land. A source country supplies the people who move to the new city. A guarantor country ensures that the charter will be respected and enforced for decades into the future.

Because these roles can be played by a single nation or by several countries working together as partners, there are many potential arrangements.

The hypothetical cases listed below help make the many possibilities concrete and clear. (They do not reflect ongoing conversations or prospective projects.)

•One country could assume all three roles, much as China did in establishing the special economic zone where the new city of Shenzhen emerged. India is considering such a path, using innovative governance structures and public-private partnerships to create new cities on greenfield sites.

•One country could serve as both the host and the guarantor. Another could be the primary source. For example, Brazil might create within its borders an open city with a special legal structure. It might then invite Haitians to be residents of this zone but not of Brazil as a whole. This kind of arrangement could arise from Brazil's lead role in the UN's MINUSTAH mission to Haiti. If conditions in Haiti do not improve or if local hostility to the mission continues to grow, Brazil may need an exit. Anew charter city in Brazil would give Haitians who want to live under Brazilian rules and policing a chance to do so without forcing this arrangement on those who do not. Because this zone would be within its borders and would attract only the Haitians who want this arrangement, the cost to the Brazilian treasury would be much lower than the cost of an indefinite military occupation in Haiti.

•One country could serve as both the host and the primary source, but a coalition of partners could act as guarantors. For example, Mauritania could host a charter city in which most of the residents are Mauritanians. New Zealand, Norway, and Britain could act as guarantors. By cooperating with these partners, Mauritania may be able to induce higher levels of investment and employment than it could achieve on its own. In the early years of in the life of the new city, three representatives, one appointed by each of Mauritania, New Zealand, and Norway could decide by a simple majority who they appoint as the head of the executive branch in this new city. In this way, the city could have both a strong executive who is personally responsible for such crucial activities as policing. Yet even before a local democracy is well established in the zone, strong executive powers can be combined with full democratic accountability that is enforced by making the executive answer to the existing democracies in New Zealand and Norway. In parallel, Britain could join as a guarantor for the judicial branch by agreeing to make the Privy Council the court of final appeal for the judicial system in the new city. From the very beginning, the new city can have democratic accountability for its executive and an independent judicial check that insures that the executive adheres to the charter.(Urbanization as Opportunity)

HONG KONG

In the words of Nobel Laureate Milton Friedman in his 1980 book, Free to Choose:

" Perhaps the best example (of limited governance) is Hong Kong—a speck of land next to mainland China containing less than 400 square miles with a population of roughly 4.5 million people. The density of population is almost unbelievable—14 times as many people per square mile as in Japan, 185 times as many as in the United States. Yet they enjoy one of the highest standards of living in all of Asia— second only to Japan and perhaps Singapore. Hong Kong has no tariffs or other restraints on international trade (except for a few "voluntary" restraints imposed by the United States and some other major countries). It has no government direction of economic activity, no minimum wage laws, no fixing of prices. The residents are free to buy from whom they want, to sell to whom they want, to invest however they want, to hire whom they want, to work for whom they want.

Government plays an important role that is limited primarily to our four duties interpreted rather narrowly. It enforces law and order, provides a means for formulating the rules of conduct, adjudicates disputes, facilitates transportation and communication, and supervises the issuance of currency. It has provided public housing for arriving refugees from China. Though government spending has grown as the economy has grown, it remains among the lowest in the world as a fraction of the income of the people. As a result, low taxes preserve incentives. Businessmen can reap the benefits of their success but must also bear the costs of their mistakes."

Described as a 'barren rock' some 150 years ago, Hong Kong is today a world-class financial, trading and business centre. Hong Kong does not have many natural resources except for its great harbour — one of the finest deep-water ports in the world. A hardworking, entrepreneurial and well-educated population of more than 7 million people forms the bulwark of Hong Kong's productivity and creativity. Hong Kong became a Special Administrative Region (HKSAR) of the People's Republic of China on July 1, 1997, after a century and a half of British rule.(A Place From Which To Trade)(Lease of the New Territories) Under Hong Kong's constitutional document, the Basic Law, the existing economic, legal and social systems will be maintained for 50 years. The HKSAR enjoys a high degree of autonomy except in defence and foreign affairs.

Major provisions which set out the basic policies of the People's Republic of China regarding the HKSAR under the Basic Law are described below.

> The HKSAR has a high degree of autonomy and enjoys executive, legislative and independent judicial power, including that of final adjudication. (BL Article 2)
>
> The executive authorities and legislature of the HKSAR shall be composed of permanent residents of Hong Kong. (BL Article 3)
>
> The socialist system and policies shall not be practised in the HKSAR, and the previous capitalist system and way of life shall remain unchanged for 50 years. (BL Article 5)
>
> The laws previously in force in Hong Kong, that is, the common law, rules of equity, ordinances, subordinate legislation and customary law shall be maintained, except for any that contravene the Basic Law and subject to any amendment by the legislature of the HKSAR. (BL Article 8)
>
> Hong Kong residents shall have, among other things, freedom of speech, of the press and of publication; freedom of association, of assembly, of procession, of demonstration, of communication, of movement, of

conscience, of religious belief, and of marriage; and the right and freedom to form and join trade unions, and to strike. (BL Articles 27-38)

All Hong Kong residents shall be equal before the law. Permanent residents of the HKSAR shall have the right to vote and the right to stand for election in accordance with law. (BL Articles 25-26)

The HKSAR shall protect the right of private ownership of property in accordance with law. (BL Article 6)

The Central People's Government (CPG) shall be responsible for the defence and the foreign affairs relating to the HKSAR. (BL Articles 13-14)(Some Facts about the Basic Law)

Hong Kong's gross domestic product, between 1961 and 1997, has grown 180 times while per capita GDP rose by 87 times.(Yeung, p. 16) Its economy size is slightly bigger than Israel and Ireland and its GDP per capita at purchasing power parity is the 6th highest globally in 2011, more than United States and Netherlands and slightly lower than the Brunei.(IMF, 2012)

Some of its distinctive policies are:

Taxation: Hong Kong has one of the lowest taxes in the world with the corporate profits tax rate of16.5 per cent and the maximum salaries tax rate of 15 per cent, which are low by international standards. Businesses other than corporate entities pay a rate of 15% on assessable profits. Property tax rate is 15% of the assessed annual rental income and forms 40% of the total revenue. (Tax Rates) According to Henley and Partners and the website lawandtax-news.com, there is no capital gains tax, no dividend tax, no value added tax, no sales tax and no inheritance tax in Hong Kong.

Trade and Industry: Hong Kong follows the economic policies of free enterprise and free trade. There are no import tariffs, and revenue duties are levied only on locally manufactured or imported tobacco, alcoholic liquors, methyl alcohol and some hydrocarbonoils. There is also a tax payable on first registration of motor vehicles. Except in the very broadest sense, economic planning as such is not practiced by the Government of the Hong Kong Special Administrative Region (HKSAR).Although it provides the infrastructure both through direct services and by co-operation with public utility enterprises, the Government’s major role is to provide a suitable and stable framework for commerce and industry to function efficiently and effectively with minimum interference. There is no protection or subsidization of manufacturers in Hong Kong. (Hong Kong: The Facts - Trade and Industry)

Immigration: Hong Kong has all along adopted liberal and open immigration policy. Nationals of about170 countries and territories are allowed visa-free visits to Hong Kong for periods ranging from 7 to 180days. Professionals and businessmen are welcome to work and invest in Hong Kong. While every effort is made to facilitate the entry of visitors and those who contribute to Hong Kong’s development and prosperity, immigration controls are designed and operated to prevent the entry of undesirable persons.(Hong Kong: The Facts - Immigration)

Rule of Law : Hong Kong has a well-established and trusted legal system based on the common law. The rights and freedoms of Hong Kong residents are safeguarded by the rule of law, an independent judiciary, legal aid, and a free and active press.

CONCLUSION

Indian cities' resilience to hold an ever increasing number of people will be put to test in the first quarter of the 21st Century, and expectations of them holding up are grim. With old crumbling infrastructure in virtually every department and decadal backlogs in project targets, India cities are bound to become the centers of chaos. The average Indian will either learn to accept the state of being as the best possible, or realize there's a better world abroad and flee the country to enjoy a better lifestyle. Disparities will become more stark when the richer class will create their havens from the government, on a small scale, and pay the premium for better power, water, transport, environment, education etc. While the poorer will be left to the state's devices – the few buses, stuffy trains, frequent power and water ~~cuts~~supply and other services at levels shown in the initial sections of the paper.

What the episodes of Gurgaon and Jamshedpur have made clear are two very important aspects of urban governance without or with minimal government intervention.

Lesser Land Use Restrictions in Gurgaon, with easier acquisition of land, conversion of 'planned' agricultural land to non-agricultural land and its discretionary use by private companies due to the absence of Urban Local Bodies showed what the absence of bureaucracy did to Gurgaon and it's presence to Faridabad. Resident Welfare Associations have been the people's voice and has taken DLF to court on issues, like under-maintained transformers leading to extended power outages. Town planning has been done by DLF itself and all attempts have been made, despite HUDA, to make the DLF City as holistic as possible.

In areas of the urban infrastructure where HUDA has it's hand though – power, sewerage, water, solid waste, public parks, sidewalks, parking and everything else – it has failed it's citizens. And this is where Jamshedpur makes its presence felt. 6 lakh people for a memorandum against the institution of a Municipal Corporation for Jamshedpur is a telling story. JUSCO's work in the town management of Jamshedpur has been exceptional and award winning. While it is a private enitity, it has extended services to the city's slum areas. It also maintains the 50 acre plus sized Jubilee Park, just to make the city more livable. All this at tariffs which would sooner or later drive any state company out of business, something that can be predicted for the state power company in Seraikela.

The lesson that we've learnt is that the urban decay in India is largely due to bureaucratic Urban Local Bodies which have little incentives to optimize resource allocation and have erected laws which restrict the entry of private players to provide services either fully or through monopoly licensing. A private, high quality government is both feasible and effective. Such an entity could prove to be the vehicle on which the basic services of life can be provided in an inclusive manner.

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