



Land and the Productive Slum

Seeking 'Truth' from 'Facts' 实事求是

The 21st Century Indian City: Working Towards being Slum Free
University of California, Berkeley
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Interrogating 'Reasons' for Slum Removal

Untenable

- Slums are on land unfit for human habitation
 - Hazard for slum dwellers and public health
- Implicit assumption that site cannot be provided services
- **Q. Is this true and what is happening on the ground?**

Unproductive

- Land is needed for more productive use
 - Implicit assumption of slum use being low/ zero productivity
- Use of land after slum removal
- **Q. Who lives in slums and are they productive?**



Plan of Presentation

- Definitions and Data Sources
 - Comparability of different sources
- Tenability
 - Where are the slums?
 - Location
 - Amenities in slums
 - Do services differ by tenability/ notification?
- Productivity
 - Who are the people living in slums?
 - What do they do?
 - Occupation
 - How do they view their future?
 - Investment in housing
- How well do the reasons for removal hold?

Definitions and Data Sources



- **Slum:** A slum is a compact area ...with a collection of poorly built tenements, **mostly of temporary nature**, crowded together usually with inadequate sanitary and drinking water facilities in unhygienic conditions... Such an area will be considered as a slum if at least 20 households live in that area for the purpose of this survey. Certain areas notified as slums by the respective municipalities, corporations, local bodies or development authorities will be treated as 'notified slums'. Slum will be considered in urban areas only. An area having at least 20 households of notified slum ...will always be considered as a slum.
- **Squatter settlement:** Sometimes an area develops into an unauthorised settlement with unauthorised structures put up by "squatters". Squatter settlement will include all slum like settlements which do not have the stipulated number of 20 households to be classified as a slum

Slum Households: Diverse 'Truths'



	Census 2001	NSS 58 th Round 2001-02		NSS 65 th Round 2008-09	
		Characteristics of Slums	Housing Conditions	Characteristics of Slums	Housing Conditions
Andhra Pradesh	13,24,762	11,29,374	12,06,112	14,98,298	9,24,898
Bihar	1,31,099	69,363	61,559	25,367	47,424
Chhattisgarh	2,15,685	1,09,902	79,459	59,059	94,005
Gujarat	3,86,318	1,57,863	1,57,485	3,00,168	3,00,553
Haryana	3,23,020	..	25,169	10,710	20,595
Karnataka	4,52,114	4,83,828	2,12,962	4,09,377	3,06,629
Madhya Pradesh	6,74,143	3,08,138	3,80,464	2,62,646	2,95,745
Maharashtra	23,75,963	31,82,576	22,30,211	29,11,170	23,19,531
Orissa	2,26,408	18,208	22,849	1,69,349	1,78,222
Punjab	2,74,570	8,962	7,826	4,351	7,633
Rajasthan	2,74,427	56,860	60,837	36,654	49,605
Tamil Nadu	9,66,162	6,19,618	3,31,700	7,24,613	4,14,848
Uttar Pradesh	8,88,267	2,27,799	2,18,660	2,16,279	3,28,692
West Bengal	9,15,380	15,30,920	4,43,658	4,42,626	4,37,210
Delhi	4,15,637	2,12,299	2,12,741	24,49,998	4,93,994
Chandigarh	29,086		12,848	5,34,803	16,203
Others	2,77,678	1,14,034	1,45,493	1,04,358	1,12,012
Total	1,01,50,719	82,29,744	58,10,033	1,01,59,825	63,47,799



Data Used in Analysis

- Different sources can provide wide variation
 - Some estimates are patently absurd
 - Delhi, Chandigarh
- Analysis uses
 - Characteristics of Slum data to investigate issues of tenability and relationship to service provision
 - Housing condition data for household level analysis and comparison of slum with rest of city
 - Three broad categories
 - Million plus cities
 - Other cities
 - Specific cities



Tenability

Where are the Slums
and
What is their status?



Which Cities?

Bigger Cities have a higher proportion living in Slums, but...



	Notified Slums	Non-Notified Slums	Total Slums	Squatter	Other Areas
All India	5%	4%	10%	1%	89%
Non Million	3%	4%	7%	1%	92%
Million Plus	10%	7%	17%	1%	83%
Mumbai	24%	19%	43%	0%	57%
Delhi	8%	11%	20%	1%	80%
Kolkata	15%	6%	21%	0%	79%
Pune	11%	2%	13%	0%	87%
Hyderabad	6%	6%	12%	0%	92%
Bangalore	2%	5%	7%	0%	93%
Chennai	7%	0%	7%	0%	93%
Ahmedabad	0%	1%	1%	0%	99%

Data Source: NSS 65th Round Housing Conditions and Amenities in India 2008-09

Smaller Towns account for a higher share of Slum Dwellers



	Notified Slums	Non-Notified Slums	Total Slums	Squatter	Other Areas
All India	100%	100%	100%	100%	100%
Non Million	50%	61%	55%	83%	76%
Million Plus	50%	39%	45%	17%	24%
Mumbai	20%	18%	19%	0%	3%
Delhi	6%	10%	8%	2%	3%
Kolkata	5%	2%	4%	0%	1%
Pune	4%	1%	3%	0%	2%
Hyderabad	2%	2%	2%	0%	2%
Bangalore	1%	3%	2%	0%	3%
Chennai	2%	0%	1%	0%	2%
Ahmedabad	0%	0%	0%	0%	1%

Data Source: NSS 65th Round Housing Conditions and Amenities in India 2008-09



Where in the Cities?

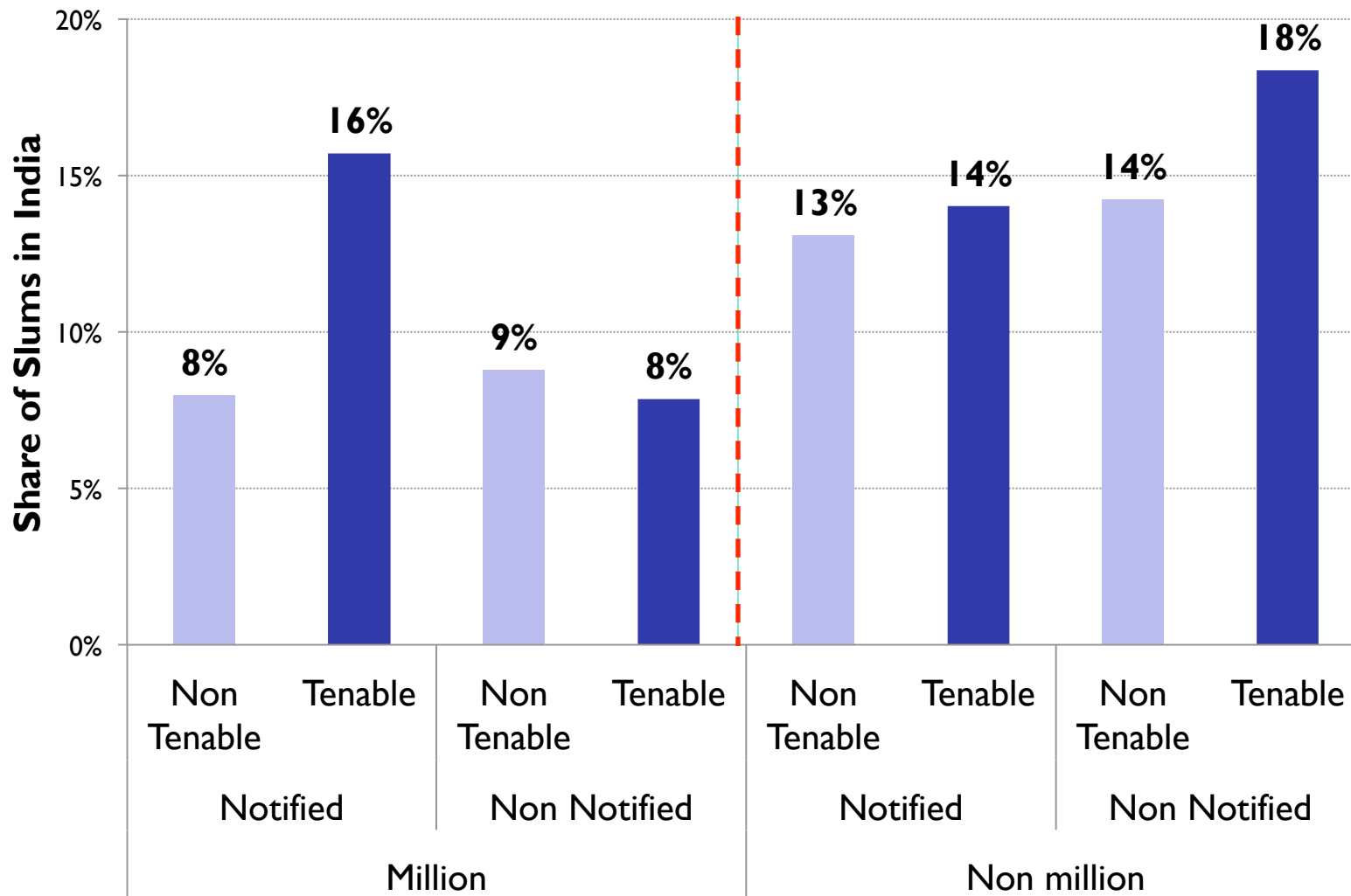
'Whose' lands do what slums occupy?



	2008-09				2002			
	Tenable		Non-Tenable		Tenable		Non-Tenable	
	Notified	Non Notified	Notified	Non Notified	Notified	Non Notified	Notified	Non Notified
Private	43%	51%	29%	31%	41%	40%	25%	27%
Public (local)	44%	31%	50%	39%	40%	37%	51%	40%
Public (non-local)	0%	0%	7%	12%	1%	4%	8%	19%
Others	13%	18%	13%	18%	17%	19%	16%	14%
Total	100%	100%	100%	100%	100%	100%	100%	100%

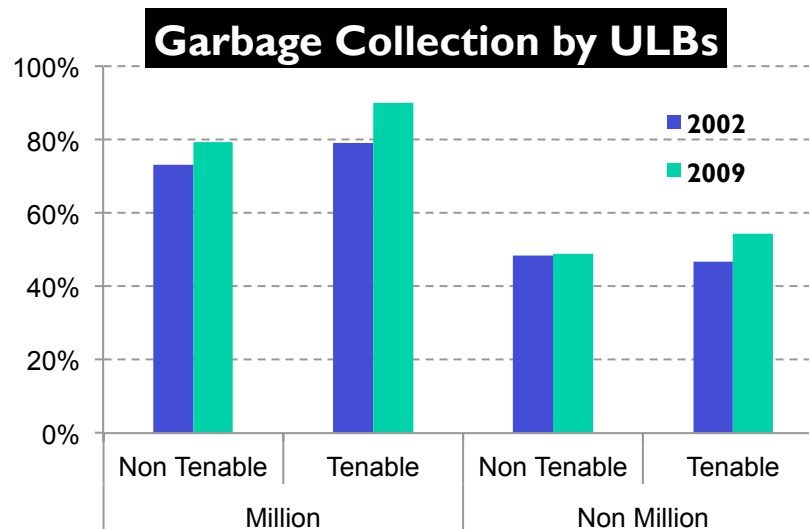
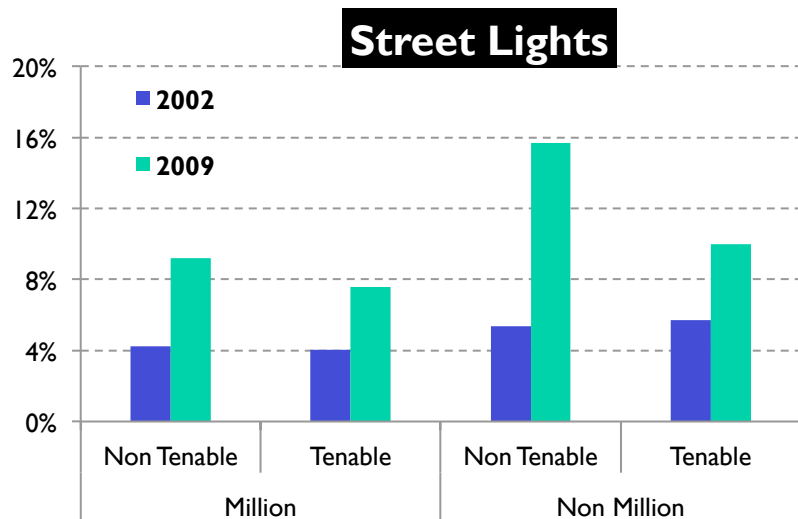
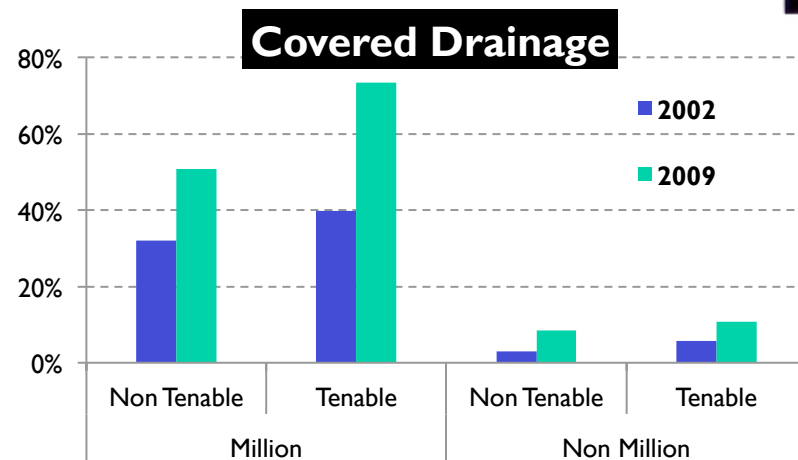
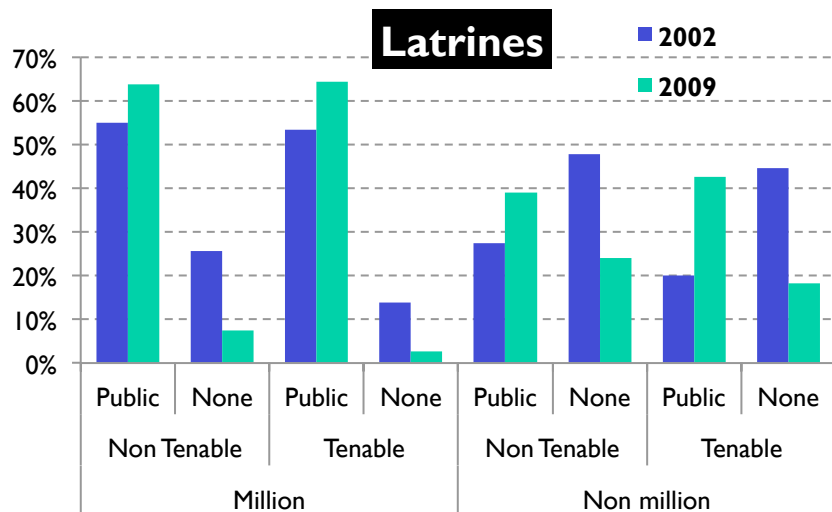
Data Source: NSS 65th Round Characteristics of Slums 2008-09 and NSS 58^h Round Characteristics of Slums 2002

Non-Tenability \neq Non-Notification



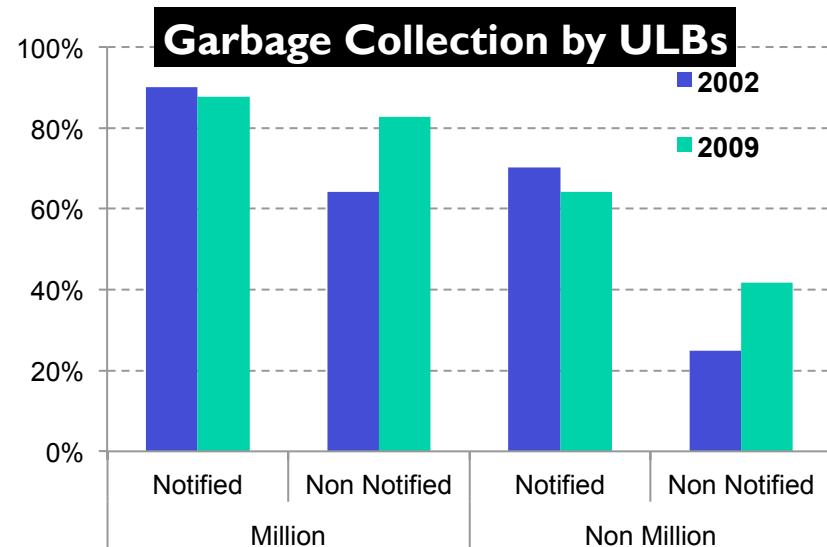
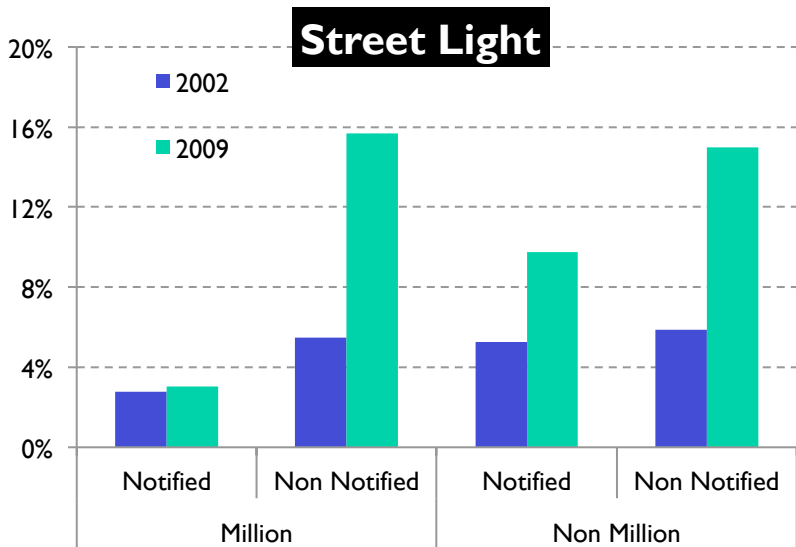
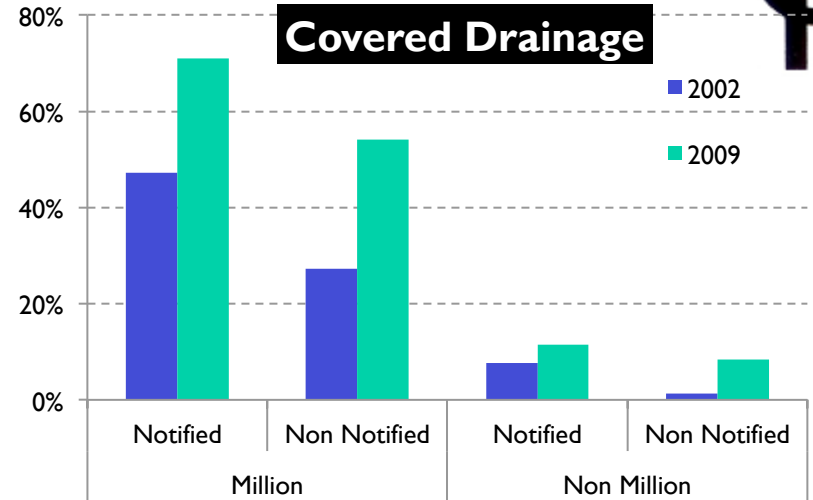
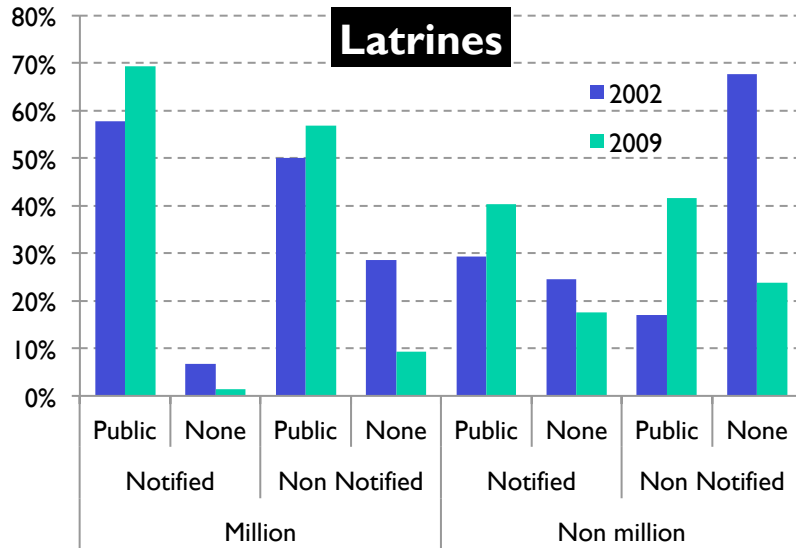
Data Source: NSS 65th Round Characteristics of Slums 2008-09

Non-Tenability ≠ Lack of Services



Data Source: NSS 65th Round Characteristics of Slums 2008-09 and NSS 58th Round Characteristics of Slums 2002

& Non-Notification ≠ Lack of Services



Data Source: NSS 65th Round Characteristics of Slums 2008-09 and NSS 58^h Round Characteristics of Slums 2002

Non-Notification ≠ Lack of Services



2002	Million Plus cities			Non Million Cities			Mumbai		
	Notified Slums	Non-Notified Slums	Other Areas	Notified Slums	Non-Notified Slums	Other Areas	Notified Slums	Non-Notified Slums	Other Areas
Latrine									
Exclusive use	16%	9%	64%	27%	19%	55%	2%	2%	60%
Shared	15%	13%	25%	14%	6%	19%	7%	9%	26%
Community latrine	55%	53%	5%	18%	12%	5%	91%	83%	13%
No latrine	13%	24%	5%	41%	62%	20%	0%	6%	2%
Drinking Water									
Exclusive use	24%	18%	58%	14%	8%	43%	33%	34%	86%
Building common use	26%	11%	24%	17%	8%	27%	38%	20%	11%
Community	51%	71%	17%	69%	84%	30%	29%	46%	3%
Drainage									
Underground	26%	13%	65%	5%	1%	20%	6%	11%	74%
Covered pucca	20%	7%	10%	5%	3%	14%	37%	14%	13%
Open pucca	35%	34%	16%	45%	24%	36%	49%	43%	11%
Open kutchra	5%	22%	3%	16%	11%	10%	6%	24%	0%
No drainage	14%	24%	6%	29%	60%	21%	2%	8%	2%
Garbage									
Local body	84%	67%	71%	63%	26%	54%	99%	97%	98%
Residents	4%	13%	19%	9%	19%	18%	0%	0%	0%
No arrangement	11%	20%	8%	27%	53%	23%	1%	3%	0%
Others	0%	0%	2%	1%	2%	5%	0%	0%	1%

Data Source: NSS 58th Round Housing Conditions and Amenities in India 2002

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Non-Notification ≠ Lack of Services



2008-09	Million Plus cities			Non Million Cities			Mumbai		
	Notified Slums	Non-Notified Slums	Other Areas	Notified Slums	Non-Notified Slums	Other Areas	Notified Slums	Non-Notified Slums	Other Areas
Latrine									
Exclusive use	24%	14%	66%	37%	28%	60%	1%	11%	58%
Shared	23%	14%	28%	23%	16%	24%	9%	5%	28%
Community latrine	50%	63%	4%	12%	23%	3%	89%	81%	14%
No latrine	4%	9%	2%	29%	33%	13%	0%	3%	0%
Drinking Water									
Exclusive use	37%	24%	59%	26%	17%	46%	41%	29%	80%
Building common use	24%	18%	27%	18%	15%	25%	21%	28%	13%
Community	33%	55%	10%	52%	63%	23%	30%	41%	5%
Others	6%	3%	4%	5%	5%	6%	8%	3%	2%
Drainage									
Underground	46%	17%	73%	11%	9%	26%	14%	19%	84%
Covered pucca	26%	26%	12%	13%	8%	15%	52%	40%	12%
Open pucca	20%	29%	13%	44%	32%	34%	29%	36%	3%
Open kutcha	3%	14%	1%	8%	10%	7%	0%	3%	0%
No drainage	5%	14%	2%	24%	41%	18%	5%	3%	0%
Garbage									
Local body	84%	76%	77%	61%	43%	57%	92%	86%	98%
Residents	3%	6%	14%	15%	18%	13%	0%	1%	1%
No arrangement	9%	16%	7%	24%	38%	26%	8%	13%	0%
Others	4%	2%	3%	0%	1%	4%	0%	0%	0%

Data Source: NSS 65th Round Housing Conditions and Amenities in India 2008-09



Take-Away

- A larger share of people live in slums in the larger cities but the larger share of slum dwellers are in the smaller cities
 - This pattern is valid over time
- While much is made of “non-tenable” locations, it does not seem to affect notification
 - Perhaps an issue in larger cities
- Regardless of whether they are notified, a certain level of public services is provided to slums
 - Situation improving over time
 - Supplemented by self-provision, especially in big cities



Productivity



Consumption



Who lives in slums?

Many poor, but also quite a few rich

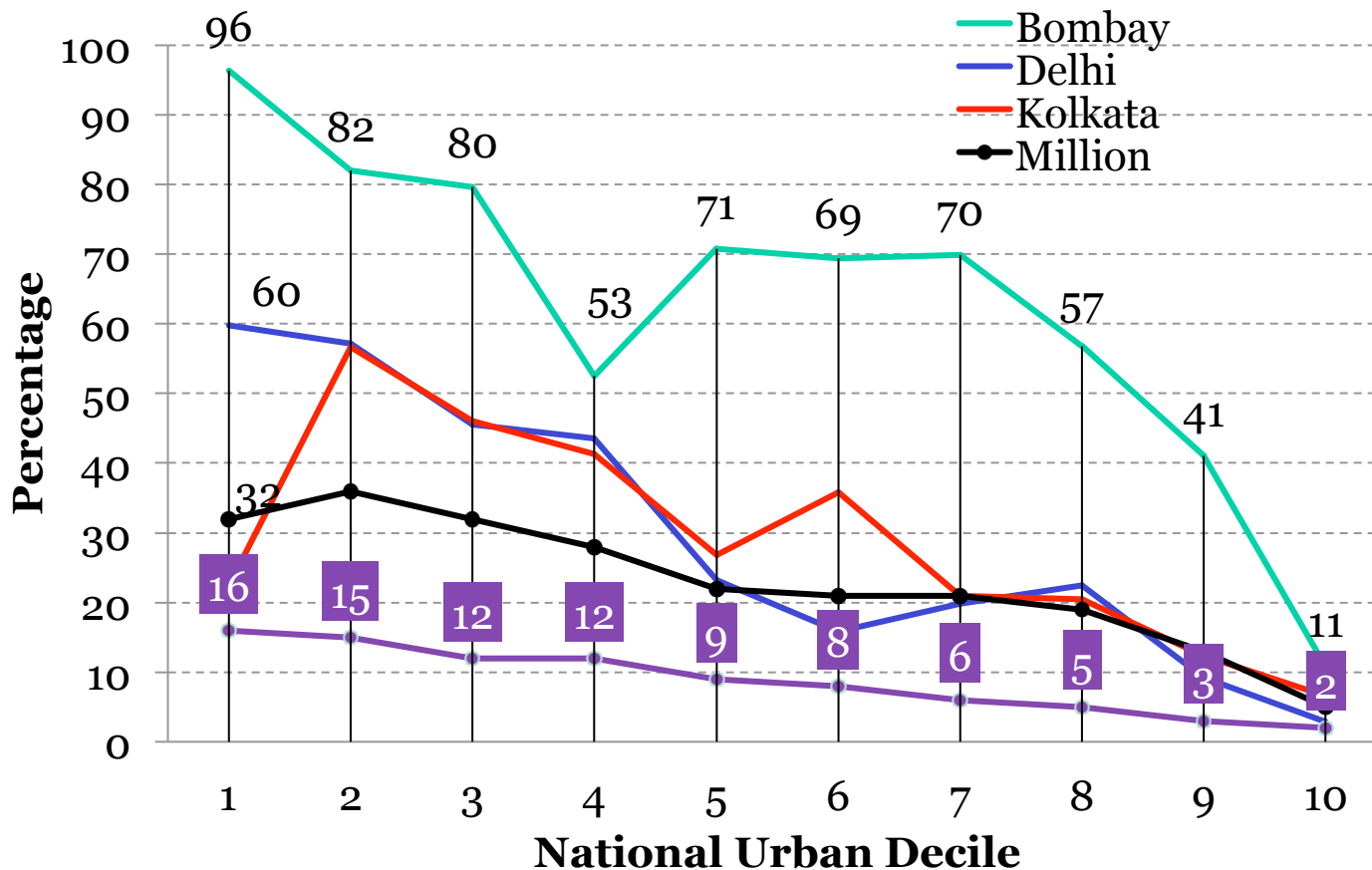
National Urban Decile	Million Plus cities			Non Million Cities			Mumbai		
	Notified Slums	Non-Notified Slums	Other Areas	Notified Slums	Non-Notified Slums	Other Areas	Notified Slums	Non-Notified Slums	Other Areas
1	15%	16%	69%	6%	7%	87%	33%	63%	4%
2	18%	17%	66%	5%	8%	87%	68%	14%	18%
3	18%	13%	69%	5%	5%	89%	55%	25%	21%
4	16%	9%	74%	5%	5%	90%	28%	24%	48%
5	14%	7%	79%	4%	4%	93%	47%	24%	29%
6	13%	8%	79%	3%	3%	93%	29%	41%	31%
7	13%	7%	80%	3%	3%	95%	41%	29%	30%
8	11%	8%	81%	2%	2%	95%	33%	24%	43%
9	8%	5%	87%	1%	1%	97%	21%	20%	59%
10	2%	2%	96%	1%	0%	99%	6%	4%	89%
Total	10%	7%	83%	4%	4%	93%	24%	19%	57%

Data Source: NSS 65th Round Housing Conditions and Amenities in India 2008-09

Big Cities are different but Mumbai is truly Maximum



Share of Slum-Dwellers by Consumption Class



Data Source: NSS 65th Round Housing Conditions and Amenities in India 2008-09

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Employment

Where does their income come from?



	<i>All Deciles</i>				<i>Bottom Three Deciles</i>				<i>Top Three Deciles</i>			
	<i>Million Plus</i>		<i>Non Million</i>		<i>Million Plus</i>		<i>Non Million</i>		<i>Million Plus</i>		<i>Non Million</i>	
	<i>Slums</i>	<i>Other Areas</i>	<i>Slums</i>	<i>Other Areas</i>	<i>Slums</i>	<i>Other Areas</i>	<i>Slums</i>	<i>Other Areas</i>	<i>Slums</i>	<i>Other Areas</i>	<i>Slums</i>	<i>Other Areas</i>
Primary	1%	1%	11%	9%	0%	2%	12%	15%	0%	1%	8%	4%
Food manufacture	1%	2%	3%	3%	1%	1%	4%	4%	2%	1%	1%	2%
Clothing & footwear	12%	8%	11%	6%	6%	11%	9%	6%	21%	6%	14%	5%
Machinery manufacture	3%	5%	1%	3%	1%	2%	1%	1%	3%	5%	3%	4%
Other manufacture	11%	10%	8%	8%	5%	9%	10%	8%	12%	10%	7%	8%
Public Utilities	0%	1%	1%	1%	1%	1%	1%	0%	1%	1%	1%	2%
Construction	13%	7%	19%	11%	22%	11%	23%	17%	6%	4%	9%	5%
Govt. Services	5%	8%	5%	8%	8%	3%	2%	3%	4%	11%	14%	15%
Traditional Services	41%	37%	34%	35%	49%	50%	35%	39%	34%	31%	27%	29%
Modern Services	6%	15%	4%	7%	3%	3%	2%	3%	9%	22%	8%	13%
Social Services	3%	5%	3%	7%	1%	5%	2%	3%	5%	6%	7%	13%
Household Services	3%	1%	1%	1%	5%	3%	1%	1%	3%	1%	2%	0%

Data Source: NSS 65th Round Housing Conditions and Amenities in India 2008-09

What kind of jobs do they do?



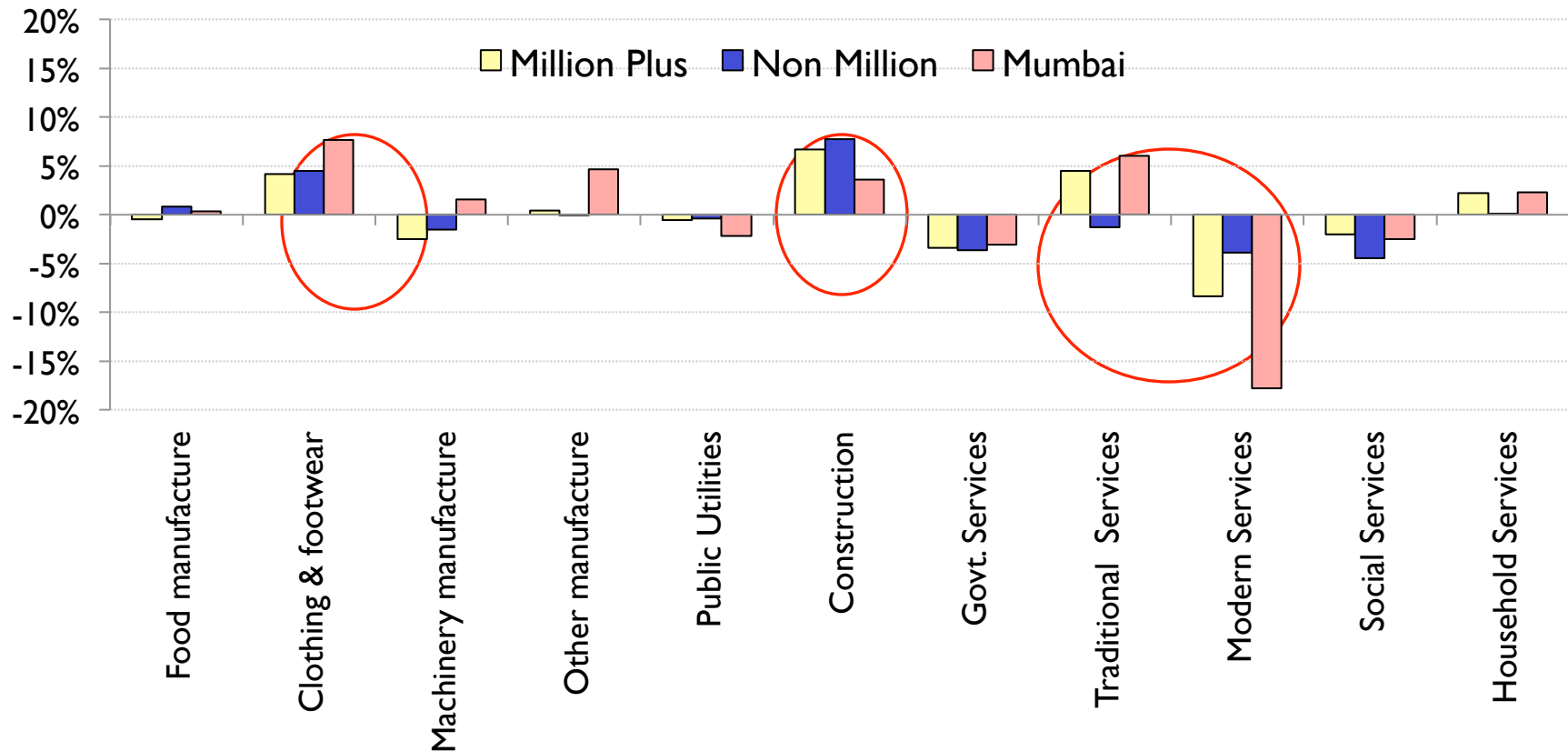
	All Deciles				Bottom Three Deciles				Top Three Deciles			
	Million Plus		Non Million		Million Plus		Non Million		Million Plus		Non Million	
	Slums	Other Areas	Slums	Other Areas	Slums	Other Areas	Slums	Other Areas	Slums	Other Areas	Slums	Other Areas
Managers	4%	18%	6%	13%	4%	12%	6%	7%	3%	23%	9%	18%
Professionals	9%	13%	4%	11%	6%	5%	2%	4%	14%	19%	9%	21%
Technicians	2%	8%	3%	6%	0%	2%	1%	2%	5%	11%	10%	11%
Clerks	5%	7%	2%	6%	1%	1%	1%	2%	6%	10%	5%	10%
Service and sales	17%	13%	12%	15%	14%	15%	10%	15%	17%	12%	13%	14%
Craft and trades	22%	17%	27%	18%	13%	23%	28%	23%	30%	12%	23%	11%
Machine operators	13%	10%	10%	8%	10%	13%	6%	8%	10%	7%	14%	6%
Elementary Occupations	27%	12%	32%	18%	52%	28%	41%	32%	14%	5%	15%	6%
Others	1%	1%	4%	5%	0%	1%	5%	7%	0%	1%	2%	3%

Data Source: NSS 65th Round Housing Conditions and Amenities in India 2008-09

Similar Industries of employment



Difference of proportion of employment in slums and other areas by Industry

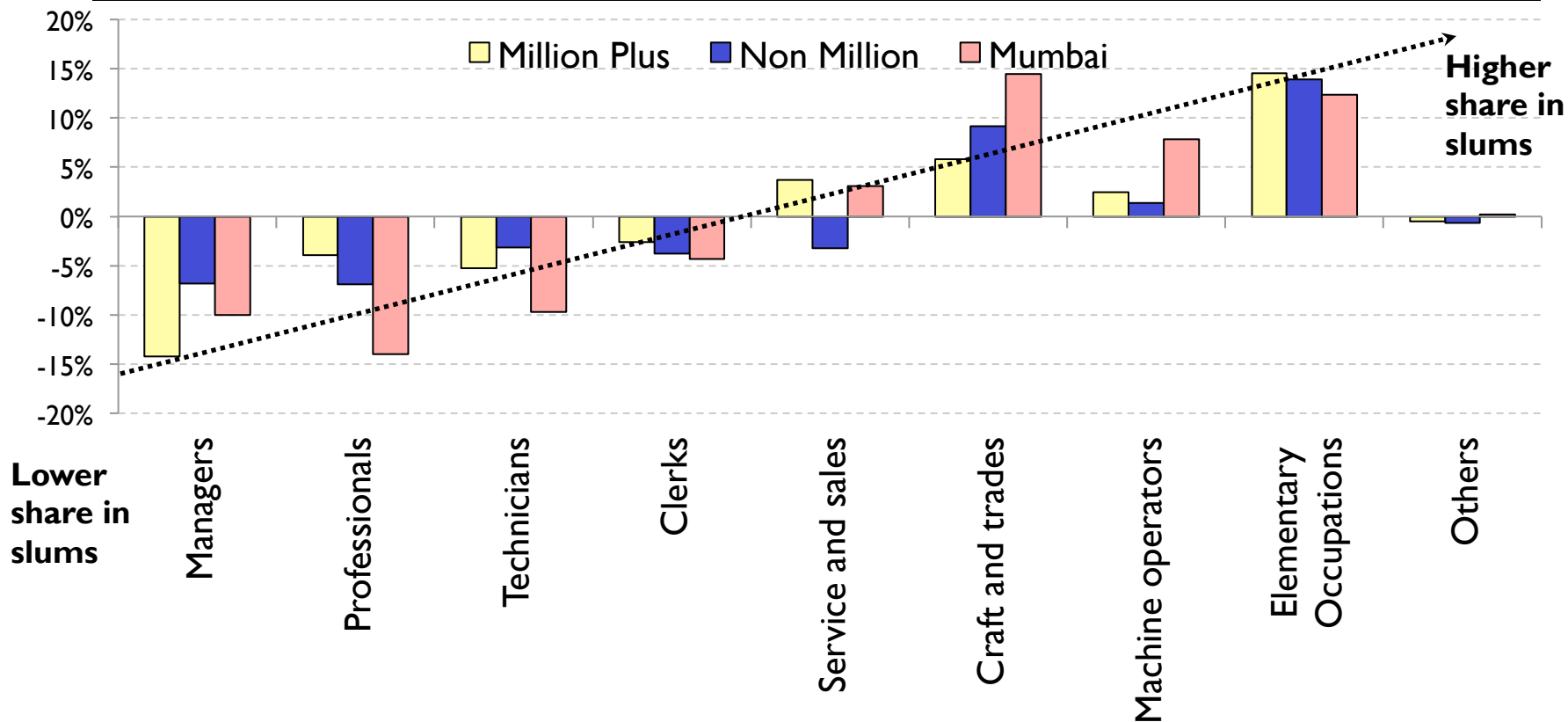


Data Source: NSS 65th Round Housing Conditions and Amenities in India 2008-09

Note: Positive difference implies higher proportion employed in slums.

But, different jobs

Difference of proportion of employment in slums and other areas by occupation



Data Source: NSS 65th Round Housing Conditions and Amenities in India 2008-09

Note: Positive difference implies higher proportion employed in slums.



Take-away

- Industries of employment of slum residents not much different from the rest of the city
 - Clothing and Footwear is more “slum-intensive” e.g., see Pani and Singh (2010)
 - Employs a lot of the richer slum residents
 - Construction employs a lot of poorer slum residents
- Traditional Services, i.e., trade, hotels, retail and transportation is a big employer
 - Household services not a huge number, despite the popular perception
 - Slums are important for the city, not just for the personal comfort of richer city dwellers
- Modern services is not insulated from employees who live in slums



Take-away

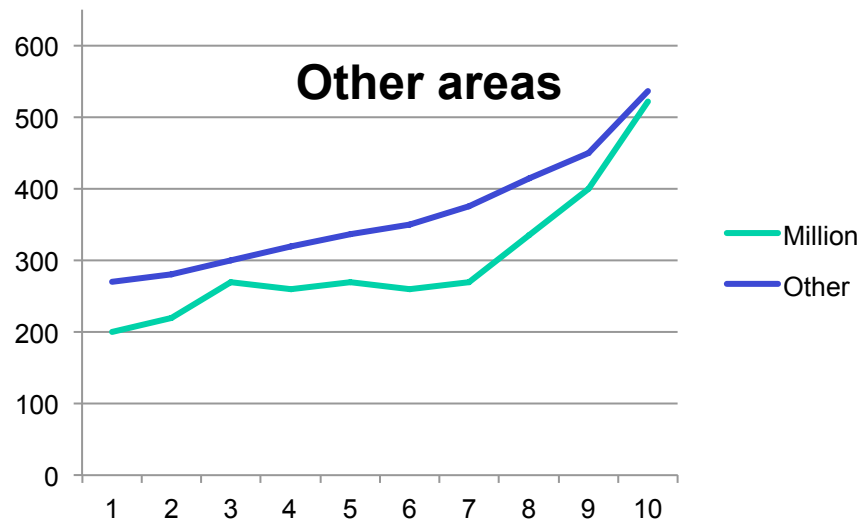
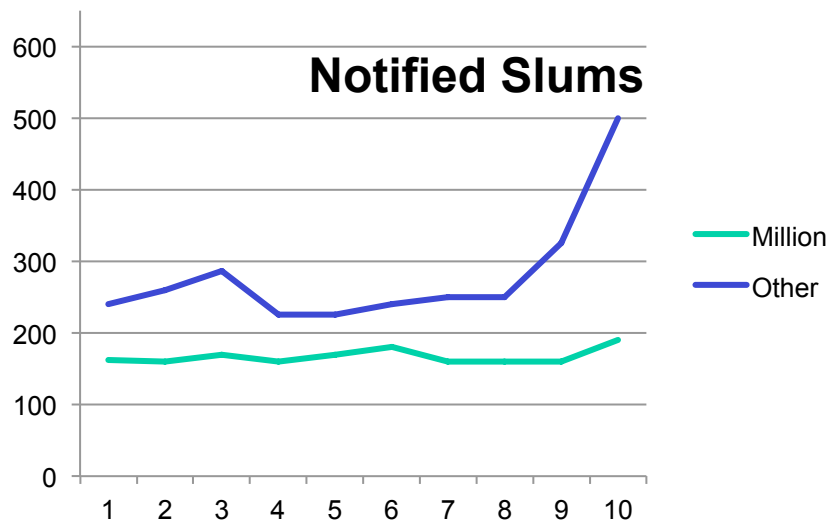
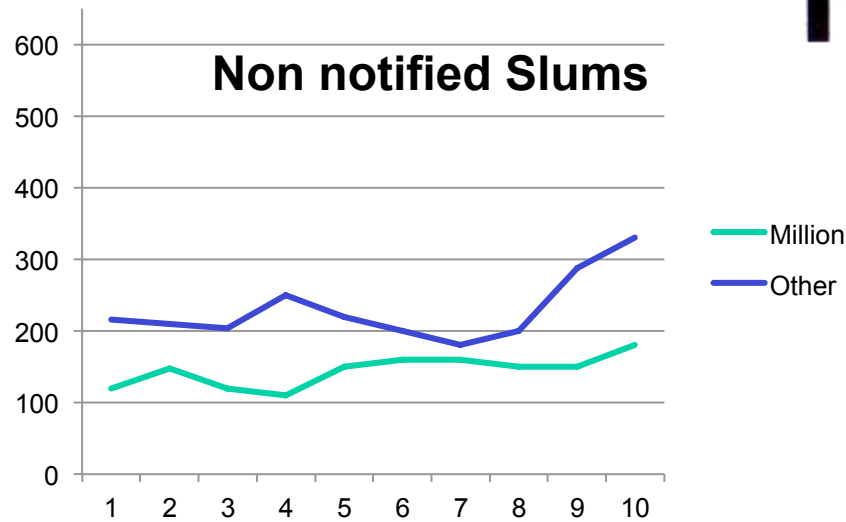
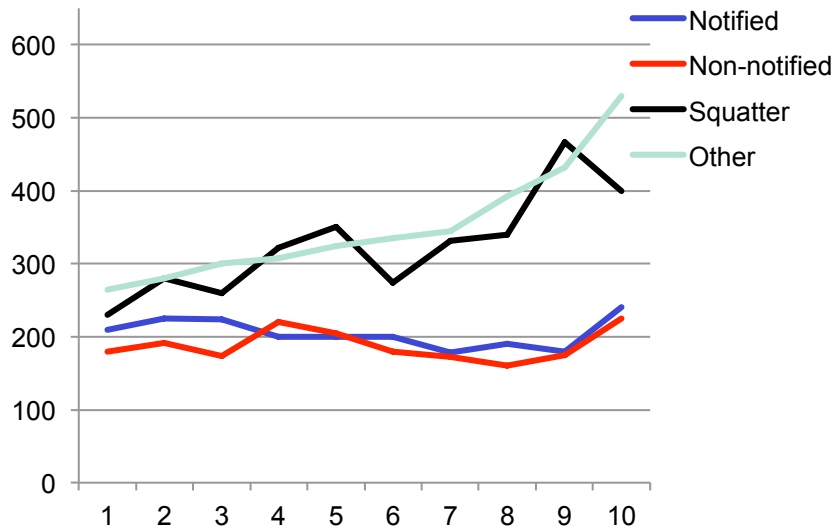
- Occupations of slum residents differ somewhat from the rest of the city residents
 - Fewer managers, professionals and technicians and more craftsmen, tradesmen and elementary occupations among slum residents
- Coupled with similarity in industries of employment, this implies that different grades of workers in the same industry live in different types of city neighborhoods
 - Deep interlinking, where no industry is insulated from actions that affect slum neighborhoods
- Reinforces the integral nature of slums to the economy of the city, whether larger or smaller



Housing Investment



Slum houses are small (even for rich slum residents in big cities)



Data Source: NSS 65th Round Housing Conditions and Amenities in India 2008-09

Proportionately more Slum Residents undertake new construction



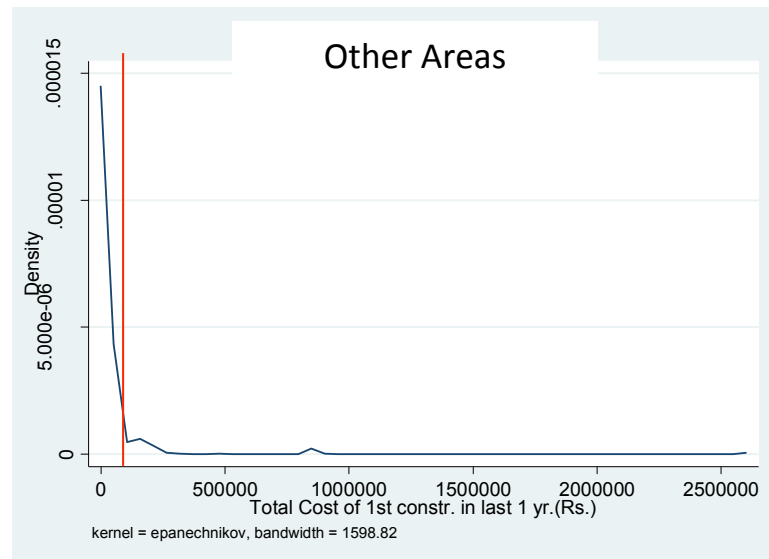
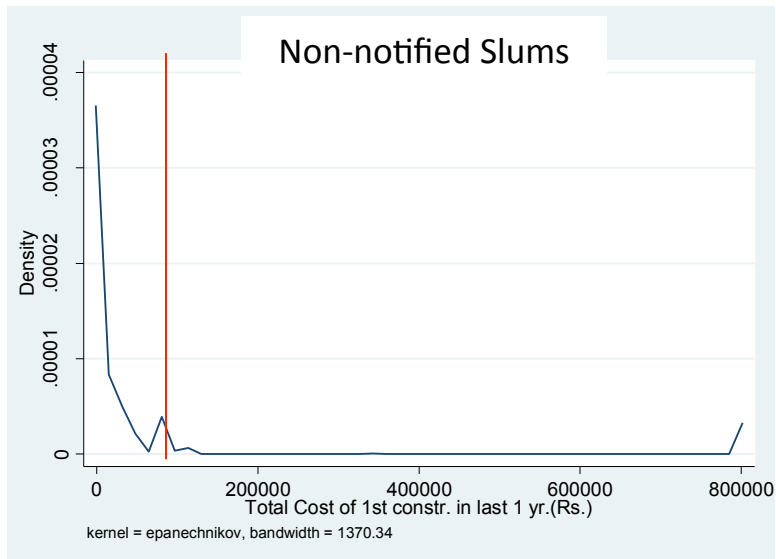
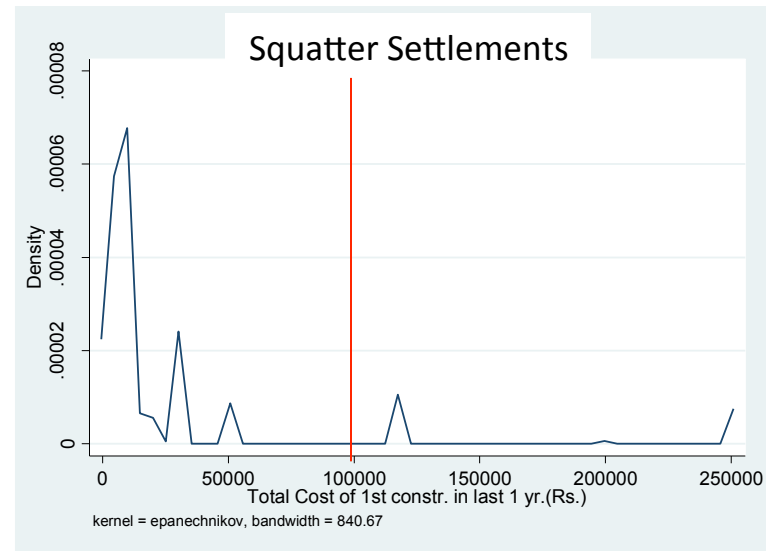
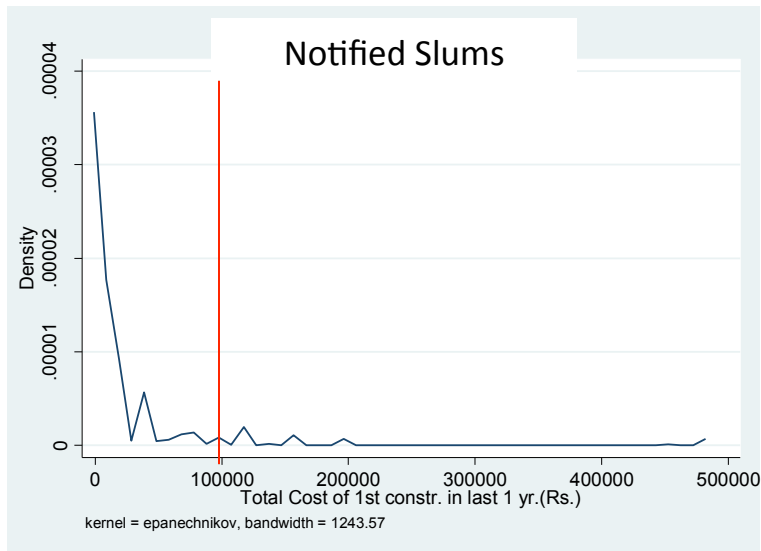
Percent of Households undertaking new construction by consumption decile

	Million Plus cities				Non Million Cities			
	Notified Slums	Non-Notified Slums	Other Areas	Total	Notified Slums	Non-Notified Slums	Other Areas	Total
1	19%	4%	3%	6%	5%	6%	6%	6%
2	7%	10%	2%	5%	4%	6%	4%	5%
3	6%	4%	4%	5%	13%	5%	5%	5%
4	6%	15%	4%	5%	5%	1%	7%	7%
5	3%	5%	2%	3%	4%	7%	4%	4%
6	2%	6%	3%	3%	4%	4%	5%	5%
7	6%	11%	4%	5%	7%	2%	4%	4%
8	5%	16%	3%	4%	3%	4%	4%	4%
9	8%	4%	2%	3%	8%	1%	4%	4%
10	6%	3%	2%	2%	8%	4%	3%	3%
	6%	8%	5%	3%	6%	4%	5%	5%

Data Source: NSS 65th Round Housing Conditions and Amenities in India 2008-09

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...and they spend a fair bit too



Data Source: NSS 65th Round Housing Conditions and Amenities in India 2008-09

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Take-away

- Slum residents undertake a significant amount of construction
 - Conforms to data showing rise in number of in-house latrines and drinking water connections
- Households in notified slums spend more than those in non-notified slums
 - De Soto vindicated?
 - But, notified slums have richer households

Distribution of construction expenditure by type of area

	Notified Slum	Non-notified Slum	Squatter Settlement	Other areas
10%	850	500	600	1200
25%	2000	2000	2000	3600
50%	7200	5500	5000	15000
75%	32000	25000	15000	50000
90%	150000	70000	50000	175000

In notified slums, half the households spend less than Rs. 7,200 but 10% spend more than Rs. 150,000 per year
For the top 10%, slum households spend more per sq. ft. than non-slum households



Conclusion and Implications

Reasons for slum removal do not hold



Untenable

- Slums in “non-tenable” areas are notified and provided services
 - Assumption that these sites cannot be provided services is invalid
 - Services improving over time
- Difficult to defend the argument that the locations are unfit for human habitation
- **Untenability is not a valid reason for slum removal in many cases**

Unproductive

- Slum residents work in similar industries as non-slum residents, albeit in different occupations in the industry
 - Integral to city’s productivity
- Both non-notified and notified slum residents invest in housing proportionately more than non-slum residents
- **Unproductivity is not a valid reason for slum removal**
 - Slums residents are largely productive investing citizens



Hippocrates and Beatles

- There is a case for looking to Hippocrates and Beatles
 - Never do harm
 - Let it be
- The extent of service provision in slums is better than popular perception and (more importantly) can be and is being improved
 - Slum improvement is an ongoing (and viable?) strategy
- Inconsistencies in the process of notification send out confusing signals about what is tenable
 - Induces a sense of (false?) promise and prompts more self-investment, which can increase reluctance to change location later
- Land based financing ignores the contribution of existing use of land



Local / National

- Less policy, more politics
 - Local solutions
 - Variation in the nature of the problem
 - A smaller city focus on improvement may have more bang for the buck
 - More tractable scale
 - Higher need for better amenities
 - Lower ability to self-provide
- Problem: Local does not control much
 - Where does change start?
- New cities
 - Governance
 - Non-Elected
 - Private land and public goods
 - Earmarking by regulation?
- Implications for land acquisition
 - Keeping the settlements out of the acquisition?
 - *lal dora, gaothan*
 - Current Chinese practice



Going forward...

- No answer to Raka yet:
 - What is the slum the solution to and what would slum free ness be the solution to?
- Recognize slum \neq poor \neq unproductive
 - Focusing on slums leaves out much of the poor
 - Understanding the slum economy and its linkages
 - Livelihood related social protection issues
 - Functionality of the city
- What is the nature of housing that is being demanded?
 - Quality -- endogenous
 - Rental



Thank You

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Pillars do not make cities, people do

A construction site is never a tidy place



How can 5% of slum households be ‘managers’?

From the NSS 66th Round ‘Employment & Unemployment Survey’ (EUS) in 2009-10, we find a large majority of senior officials/ managers are ‘Owners’ Their share is 64%

Owners are defined as those working in partnerships or proprietorship and self-employed.

Note: EUS is individual level data and cannot be separated by those living in slums and non slums.

<i>in million</i>	Share of Owners		
Managers	12.3	7.9	64%
Professionals	9.3	3.5	38%
Technicians	6.5	1.0	16%
Clerks	5.3	0.1	2%
Service and sales	14.0	4.6	33%
Craft and trades	4.0	0.6	15%
Machine operators	17.9	4.5	25%
Elementary Occupations	7.4	1.7	23%
Managers	17.7	2.8	16%
X	0.1	0.0	21%
Total	94.4	26.7	28%

