A STORY AND AN ANALYSIS OF INDIAN CITIES

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Firstly, I would like to thank my supervisor Kyle Farell for his constant support and guidance. I would also like to express my gratitude to Dr. Tigran Haas for not just giving me the opportunity to be part of this wonderful programme but also for being an inspiration along the way.

Finally, I would like to thank my support system, my family and friends back home and my new family in Stockholm my fellow classmates.
Indian cities are where some of the highest concentrations of people live. The high concentrations of people coupled with constant migration to the urban area makes it important to assess the urban environment. The cities are composed of a population of a minimum of 1 million to a maximum of 25 million.

The main objective of this paper is to analyze the perspectives of the people and their take on the main issues that plague Indian cities. This will in turn help in deciphering the question of does the priorities of the Government align with that of the people?
India - An Overview
A story and an analysis of Indian Cities

The voices of the people

A glimpse into India's past

India began its journey with one of the most prosperous civilizations. The Indus Valley civilization whose plan consisted of right angled grids, is said to have inspired the plan of New York.

This was soon followed by the vedic period which involved setting up of institutions. Centers for education were set up all over the country. The vedic period was soon followed by the golden age.

The golden age, was a time when India was immensely prosperous. India was soon invaded by the Muslims and the Mughal rule was established. This was a period when India's wealth slowly diminished. The Mughal rulers though not as vicious as the rule that followed accumulated the wealth of India for themselves.

In the year 1858, the British followed Vasco da Gama's route to India. They landed in India and saw all the wealth the prosperous land had to offer and motivated by greed conquered the nation and set up a rule called the British Raj. The British Raj drained as much as it could from the Indian soil drenched in wealth. The year 1947, the month August, India was freed from the British Raj.

All the country had achieved up till now had gone down the drain.

India turned into a developing nation which had to rebuild itself with enormous challenges at every step of the way.
India is located in the continent of Asia, it is a vast linear nation with diverse terrain ranging from the highest mountain ranges and plateaus to some of the flattest terrains with a large coastline. The northern region is bordered by Pakistan on its left and Nepal and China on its right. The southern part of India is surrounded by water on all sides.

Geography and climate played a major role in the formation of cities, the first cities were located in the edges of the country and started as cities of trade, Bombay, Calcutta and Madras. Soon cities started to emerge all over India.

Population

The size of India is large with an area of 3.297 million sq.km with a population of 1.34 billion. India is composed of several cities each with varying population.

20 of India’s largest cities in terms of population are as follows:

1. Mumbai
2. New Delhi
3. Kolkata
4. Chennai
5. Bangalore
6. Hyderabad
7. Ahmedabad
8. Pune
9. Surat
10. Kanpur
11. Jaipur
12. Lucknow
13. Nagpur
14. Patna
15. Indore
16. Vadodara
17. Bhopal
18. Coimbatore
19. Ludhiana
20. Agra

(Chris Johnson 2011)
The population has increased tremendously. Though 67% (as per census 2011) of the population still lives in rural areas, the proportion of the urban population has increased from 19.9% in the year 1971 to 32.8% in the year 2017.

According to the Registrar General of India, it is expected that 67% of the total population growth is going to take place in the urban areas across the next 20 years. The urban population will increase from 439 million in 2017 to 534 million in the year 2026.

Moreover, the UN-Habitat in 2008 predicted that the population of India’s major cities, Mumbai, New Delhi, Kolkata, Chennai, Bangalore, Hyderabad, Ahmedabad, Pune, Surat, Kanpur and Jaipur will increase to over 4 million each by the year 2025 making the megacities constitute for over 24% of the total urban population. At the rate at which the cities mentioned above are growing it is not hard to believe that this prediction will come true.

Challenges in Indian Cities

Urban issues exist in urban areas across the world, the magnitude of the issues is what makes them different.

The urban environment

The urban environment in India is one that locals of the city often complain about. The urban environment is in such a strain to support the large population. The growth in population is not proportional to the growth in the quality of life. The list of issues in developing nations such as India are endless. The biggest issues after keen observations of the urban realm are as follows:

Overcrowding

Overcrowding or crowding by definition is the condition where more people are located within a given space than is considered tolerable from a safety and health perspective which will depend on current environment and local cultural norms.

Overcrowding is one that is obvious in Indian cities and the population described in the previous section clearly indicates the issue exists. New Delhi for instance has a population density of 9,340 persons per sq km (as per the Census 2001).

Most neighbourhoods in the cities are extremely overcrowded. Overcrowding is one that encourages the spread of diseases and creates unlivable conditions. A recent article talks about the effects of overcrowding. It says that the biggest issues of dense urban living is people’s apathy and indifference. This indifference makes people shy away from getting involved in other people’s affairs. This indifference they say leads to people ignoring the brutal things they see such as accidents, molestation, assaults and even murder. They merely choose to be mere onlookers. (Puja Mondal: 2017)

Figure 3

Density Distributions in the three most populated cities
Source: Connecting cities: India, 2008
Urban Sprawl

Urban sprawl by definition is the extension of a city outside its pre-defined core area, into the adjacent rural areas. There is an increasing trend of urban spraws in the Indian cities.

A team of researchers from the Indian Institutes of Science (IISc) conducted a study to map the urban sprawl in Indian cities. The research was conducted by using remote-sensing satellite data since 1990. The year 1990 was a significant period because of the establishment of businesses in cities across India. This lead to rapid urbanization all over the country. Bangalore came in first with a huge growth of 632% in urban areas in the last few decades. This is followed by Hyderabad, Kolkata, and New Delhi. Chennai in comparison has only increased from 1.46% to 18.55%. (Ramachandra T. V., Uttam Kumar and Bharath H. Aithal. 2012)

The results of the study says that the impact of such rapid urbanisation will be felt by climate change, increase in green-house gas emissions, lack of infrastructure, traffic congestion and lack of basic amenities. These effects are already being seen in Indian cities.

Housing shortage

There is a wide disparity in housing between the affluent, middle-income and low-income segments of the population. The most expensive areas in the cities are the home to industrialists, movie stars and the millionaires. A home in these areas can set one back by a few millions. In the city of Mumbai the houses are priced at around $9000 - $10,200 per square meter. With cities where the land rates are so high, people from lower income groups are forced to reside in small cramped spaces. A family of five often resides in a 1BHK apartment. On the other end of the spectrum lies poverty and poor housing conditions for a majority of the population. They live in informal settlements commonly referred to as slums in some of the worst conditions.

Informal Settlements

This is one of the most important aspect that plays a predominant role in shaping many cities in India. They call it the darker side of urban growth. When the population increases at high rates in the cities it makes planning for urban growth in countries like India difficult. When housing in the major cities are not affordable one resorts to living in what is known as informal settlements. These are settlements which do not exist officially and are usually temporary structures.

This temporary form of housing is a serious problem. In 1988 the UNI report stated that between one-fourth to half of the urban population live in informal settlements. This is because it is not profitable to build housing for the poor. A recent census data revealed that over 65 million people now live in slums. (Rukmini.S. 2016)

Overcrowding, poor environmental conditions, scarcity of health and family welfare services, and total absence of minimum level of residential accommodation are the main characteristics of these informal settlements. It is a fact that the conditions of people living in slums are far worse than in rural areas.

The data as per the census 2011 indicates a large section of the urban population living in informal settlements. 41.3% of Mumbai’s population live in slums followed by 29.6% in Kolkata and 15% in Delhi. Below are maps with depict the percentage of slum dwellers in the top three cities with the highest population.

**Figure 4**
Percentage of people living in slums
Source: Connecting cities: India, 2008

Pollution

The cities in India are some of the major polluters in the nation. The cities in fact discharge around 40% to 60% of their untreated effluents (sewage and chemical) into water bodies in the vicinity. (Puja Mondal. 2017)
Industries and automobiles pollute the atmosphere with smoke and toxic gases. The issue of environmental pollution in urban areas is so significant that the Supreme Court decided to step in. The first rule was in 1995 where strict enforcements of environmental laws lead to the relocation of about 150 hazardous industries in Delhi.

The vehicular emissions in New Delhi account for 64 per cent of Delhi’s air pollution, power plants 16 per cent and industries account for 12 per cent. The situation in New delhi was so dire, that the authorities were forced to restrict the use of private vehicles by allowing vehicles to drive only on alternate days based on the number plates being odd or even. New Delhi has now earned the title of one of the most polluted city in the world.

The medical board in India have made claims that the polluted environment contribute to deteriorating health conditions in India. Living in the major metros in India such as New Delhi, Mumbai, Bangalore and Chennai increases the chances of having cancer due to environmental pollution.

**Lack of safety regardless of gender**

Public safety has emerged as an important aspect for governments across the world. It is the duty of the state to ensure the safety of its citizens, against threats to their well-being as well as the traditional functions of law and order. Rapid urbanization increasing the population day after day has made the concept of safe city as a top priority in ensuring secure living and prosperity.

A problem in the large cities in India is that there are issues in terms of security. This forces the people to resort to organize their own security. Organizing one's own security leads to the rise of gated communities with private security. The entry to these communities is highly controlled and monitored by the security staff. This is in the case of the middle class and the rich.

The lack of employment leads to a lack of security in the sense that people are pushed to resort to illegal means of theft and violence to make their ends meet.

Another aspect is safety in the public realm. The National Crime Records Bureau was established in 1986 with a mandate to empower Indian Police with information technology solutions and criminal intelligence to enable them to enforce the law effectively. The unfortunate aspect of reviewing the crime records is that it portrays India as being safe with a low crime activity. This is because most of the crimes go unreported. People prefer to not report the crimes as they feel that no steps will be taken to achieve the justice they desire.

**Lack of safety for women**

Cities appear equally accessible to men and women but in reality they are anything but that. It is a fact that a high percentage of women feel unsafe in urban India and it is far worse in rural areas. In 2014, a survey revealed that 49% women responded that they felt unsafe. 71% of the women feel unsafe in public spaces. In the survey, 52% of women voiced the need for change in men's attitude, 50% for strict policing and 48% percent voted for stronger laws to ensure their safety. *(Rania Habiby Anderson. 2014)*

Further proof in this realm comes from the UN-Habitat’s survey, as part of the Global Assessment of Women’s Safety, 2009 which identified violence in public spaces as one of the three most widespread forms of violence against women.

Payal Gandhi Hoon the founder of an organisation that helps women in emotional wellness training company in order to enable them to be independent in their thoughts and actions with the use of Neuro Linguistic Programming suggested to following measures that women should take in their day to day activities: *(Rania Habiby Anderson. 2014)*

- Be sensitive of the time, locality, people, and the purpose of where you are at all times.
- Book pre-paid transport from reliable sources.
- Travel in groups when commuting late night.
- Own pepper spray and carry it with you at all times.
- Enroll in a self-defense class.
- Download safety apps on your smartphone.
- Make sure you have emergency contacts on your phone.
- Use the GPS or do your groundwork when going to a new address.
- Consciously avoid secluded, ill-lit and deserted roads.

It is sad that women have to resort to extreme measures to ensure their safety but such is the case in a majority of the cities in India and in fact in most parts of the world.

**Lack of basic infrastructure**

Infrastructure is defined as the basic physical and organizational structures and facilities needed for the operation of a society or enterprise. Urban India suffers from a lack of basic infrastructure and some of the major issues in terms of infrastructure are given below:

**Waste Disposal and Sanitation**

The large population implies that there is a large amount of waste generated. The large amounts of waste need to be collected, transported and disposed in an appropriate manner. The inability of the municipality in ensuring the disposal of waste in a safe manner has lead to problems such as pollution, health issues and noticeable stench in cities. Electronic waste is a major threat in the modern day. Cities in India must find effective ways to dispose or recycle the waste.

The maladministration in the municipalities is also one of the main problems. The informal settlements also contribute to a lot of stagnant waste in many cities.

An article published a few years ago gave an interesting insight to the other side of waste disposal and exposed the various forms of racketeering which are as follows:

- Since payment for garbage removal is made on the basis of trips and not the weight of the garbage picked up, a large number of trips are shown on records and money is split between the contractor and the municipal employees;
- A large number of vehicles used for garbage collecting operations are actually used for unauthorized work.
Debris is diverted and sold to private parties for filling up building sites while payment or debris disposal is taken from the municipality; and Drivers of trucks and dumpers sell diesel meant for sanitation trucks.

As cities grow it is highly important to find effective ways to treat waste and create sanitary living conditions for the people. This should be a high priority as it deteriorates the health of the people. (Puja Mondal, 2017)

**Figure 5**

**Shortage of Electric Power**

Electricity is one that is crucial in our day to day. Life is unimaginable without being able to charge your everyday gadgets. India on the whole is facing huge shortage of electric power. This is seen in urban areas and to a greater extent in rural India. There is a great demand for generating much more electricity than what is currently being generated. There is also a huge conflict over the distribution and supply of power among various states in India which puts a higher strain and often leads to severe power crises in cities.

**Figure 6**

Most cities in India have been facing problems with regard to public transportation for many years. Transport problems increase and become more complex as the cities grow in size.

Traffic and congestion is directly linked to inadequate public transport. Traffic is a common entity in Indian cities. The number of buses in metropolitan cities is not adequate and commuters have to spend a few hours to get into a bus. More than half the population of India is poor and hence the public transport is very important. The middle class and the rich resort to buying private vehicles. The increasing numbers of private vehicles two and four wheeled put an enormous strain on the roads.

In 2012, Delhi had the maximum number of cars in the country at 7.35 million, followed by Bangalore (4.1 million), Chennai (3.7 million), Hyderabad (3.3 million) and Pune (2.2 million). Surprisingly, Mumbai doesn’t make the cut, coming in sixth with a little over 2 million cars. (FP, 2014)

**Figure 5**

**Number of vehicles in Indian cities in 2012**

*Source: MORTH, Barclays research*

**Figure 6**

**Transport Modal Split in The three most populated cities in India, London and New York**

*Source: Connecting cities: India, 2008*
Recently the local and state governments have taken this problem into consideration and have proposed the metro rail systems. This has improved the situation in Calcutta and more recently Delhi but they are still not adequate. Mumbai on the other hand has had a long history of local train services but even they are proving inadequate with rising populations. Presently people rely on public buses but their number is not enough nor do the roads accommodate all the vehicles in use. Traffic jams are common and further delay people from reaching their destinations.

Indian cities are similar. The cities lack any guiding principle of design and look unfinished. Planners in India are unable to link new urban areas effectively. The Architects are not proactive and do not influence city policy.

Centralised Planners have a single uniform code for practically any urban project, the same code is followed for a new township and for a historic city center. Building similar structures in different landscapes changes the natural topography of the land. This destroys the specific natural, cultural and economic backgrounds which gives each city its uniqueness. Further there are no definite rules or laws on encroachments, hoarding, FSI, etc. Politicians call the shots and citizens are distanced from planning.

People are indifferent as long as minimum services are available and do not bother to voice any issues. If cities are developed without citizen participation, they will evolve into monotonous repetitive entities. Planning policies should be on an area-wise basis taking into account the physical, economic and social characteristics of an area.

Specific building by-laws pertaining to the specific topography of an area can be more in tune with the environment and also address the actual requirements of local citizens.

For example in Mumbai, the old mill area could be redeveloped specifically for local residents in the form of schools, parks, hospitals and houses instead of being made into luxurious high-rises for the rich. This could help prevent migration of old mill area residents to the further suburbs. Similarly CRZ (Coastal Regulation Zone) puts a blanket ban on all development within a certain distance from the coast which is detrimental to the development of sea front cities. Instead the local population should have a say in the development of their region. The centralized rules should only deal with macro issues, while the local groups deal with micro issues.

A policy shift has to be made and regulations should be split into two levels- city and area. Local population can present the requirements at area level. Urban planners, designers and architects could work together and create checks and balances in the urban design processes. This is more so when the technical terms are too complicated for the locals to understand. Another method of giving voice to the people is by advocacy planning. Till recently in India, it only took the form of opposition. But if the social groups are able to play a role in reviewing and assessing specific plans then this would go a long way in addressing the needs and aspiration of the citizens.

The following are Rahul Mehrotra’s twelve crucial points to designing Indian cities.

The Expert
Rahul Mehrotra

In order to get a glimpse in to the issues in terms of planning I turned to Rahul Mehrotra. Below is a summary of his paper Making Indian Cities- Urban Design in the New Millennium.

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The following are Rahul Mehrotra’s twelve crucial points to designing Indian cities.
1. The urban designer has to identify and understand the key elements that structure and bond the various components of the city. This also necessitates deciphering the implicit programme of the city and interpreting the needs and aspirations of its citizens. It refers particularly to the poor, underrepresented groups, and rural migrants, whose aspirations must be woven into the emerging form and public image of the city — through its architecture and built form.

2. FSI or Floor Space Index is the ratio of the combined gross floor area of all stores of a building (including the area of walls) to the total area of the plot or premises. In short, the ratio thus stipulated is what determines the amount of square feet that can be built on a particular site. Architectural features such as balconies, porches, staircases are exempt from this calculation and therefore liberally used and often misused through enclosure and appropriation.

3. Essentially a centralized approach to the evolution and implementation of planning, whether it be development plans, building bylaws, or rules like the Coastal Regulation Zone (CRZ, which disallows any new development within stipulated distances from the sea) will invariably result in recasting a region or city in a singular image. This approach, however, also does not recognize differences and prescribes but one solution, whatever the problem might be.

4. Clarity in rules is a fundamental to administer the physical form controls for a City. Clear and simple but focused rules, which are easy to implement, could go a long way in improving the physical environment. Under Portuguese rule in Goa for example, it was compulsory to Whitewash buildings and remove any awnings within one month of the end of the monsoon. This was enforced and substantially ensured an all-round maintenance and visual improvement of the built environment on a yearly basis. Although not law today, it is still followed by many owners as a practice in Goa.

5. As a society we put great premium on subverting the system — a good chartered accountant is one who knows the loopholes in the tax structure, as is the smart architect one who knows how to juggle, exploit, and maximize FSI — to maximize profit for the developer or owner, often at the cost of creating a good building!

6. These ideas about Hotele Metropole — the notion of a city being used as a hotel by a great deal of its inhabitants has been proposed by the renowned urbanist John Friedmann in his seminal essay "The Common Good: Assessing the Performance of Cities" published in City, Space and Globalization, ed. Hemlata Dandekar, College Of Architecture and Urban Planning, University Of Michigan, Ann Arbor.

7. Jaipur is a good example of this balance between clear big moves and small individual adjustments in a city. Its urban form represents a planning attitude that combined clear urban design gestures at the city level with the obvious need for flexibility at the neighbourhood level. Starting from the city wall, moving along the main avenues or bazars, the overall structure and cohesive-ness of the city becomes evident. The avenues with their crossroads punctuated by chaupars suggest a rational system of traffic movement and a logical placement of commerce along the main arteries. The important public institutions are placed at the crossroads or other strategic points, depending on their importance. These components form the public face of the city. The individual facades of the buildings carry their own messages but are held together as part of a city composition by the larger regulating order of the nine-square grid (with its own mystical connotation). Yet when you enter a mohalla, the informality is startlingly wonderful — irregular streets, wayside shrines, hawkers — the entire microcosm of chaotic urban India — a flexibly ever-changing organic city.

8. The failure of most recent urban design in India is that it is not only devoid of conceptual clarity, purpose, and principles but also ignores class dynamics, polarities, and interdependence that are an integral part of a city's evolution. Cities have become far too complex for simplistic solutions and approaches to urban design. Contemporary Indian cities must necessarily recognize the entire gamut of forces that actu upon and create city form — mould the physical environment. It is for this reason that planners should also look beyond issues related to the physical aspects of our development control rules and respond to and understand the social realities of the city in planning for a mix of uses and activity patterns — the crux of contemporary needs.

9. Such a planning unit could be defined on the basis of criteria which take into account a sort of urban fabric definition that goes beyond the simplistic definition of a neighbourhood. The criteria would chart economic and social levels of the residents, patterns of use, typologies of buildings and form from the affordability angle as well as social mix.

10. The CRZ notification was issued on February 19, 1991 with the intention of regulating development along the coastline. The regulation originated in a directive from the Prime Minister on November 28, 1981 and focused on beaches along coastal areas. Interestingly, the directive evolved and was fine-tuned for different situations, viz. along the marine coast, creeks, rivers, etc.; however, in spite of this fine-tuning, the spirit of the regulation is still one which works with a more or less blanket imposition and thus is susceptible to misinterpretation and abuse.
Rahul Mehrotra clearly points out the issues that affect the city in terms of planning. His twelve points give a clear idea of what can be done to improve the cities in India.

11. In order to achieve this, a city could be divided into zones based on a combination of topographical, land-use criteria and those determining the age of the buildings in the area. Thus land-use categories could be discussed in the context of their location in a city, viz. residential or commercial areas along the waterfront, commercial areas and mixed-use areas at transport intersections, residential areas on hills or in historic precincts. By evolving bylaws specific to an area, the urban form could be fine-tuned to respond to the particular topography, perceived needs, and opportunities that the area offers. In fact, the only bylaws that should be invariable are those that relate to hygiene, public health, and safety. All other laws which have an impact on the urban form and use designation, should be evolved precinct-wise.

12. These ideas on advocacy planning have been discussed in greater detail by Lisa Peattie Hie in her landmark essay "Reflection on Advocacy Planning published in the March 1968 issue of the Journal Of the American Institute of Planners. Preceding this publication was the seminal essay by Paul Davidoff titled "Advocacy and Pluralism in Planning" which was published in the Journal in 1965.
In the recent years an extensive body of literature has emerged on the issues in Urban India. A large portion of the literature focuses on analyzing the issues by different organisations. The experts in the field have published various texts on topics that range from informality to urban sprawl. The Government has attempted to address these issues in terms of policy. The database of the individuals in the cities of India is one that is missing.

Understanding the urban realm through the people living in the cities requires additional tools and techniques. In order to collect data from the people in the cities it is important to use an effective method.

ANALYSIS OF THE URBAN REALM THROUGH A NATIONWIDE SURVEY

“Social psychologists are interested in understanding how people influence and are influenced by, their social environment.”(Penny S. Visser, Jon A. Krosnick, Paul J. Lavrakas, AND Nuri Kim . 2013)

This concept can be applied to understanding the urban realm as well.

Types of survey research:

Quantitative method

Quantitative methods emphasize objective measurements and the statistical, mathematical, or numerical analysis of data collected through polls, questionnaires, and surveys, or by manipulating pre-existing statistical data using computational techniques. Quantitative research focuses on gathering numerical data and generalizing it across groups of people or to explain a particular phenomenon.

Qualitative method

The word qualitative implies an emphasis on the qualities of entities and on processes and meanings that are not experimentally examined or measured [if measured at all] in terms of quantity, amount, intensity, or frequency. Qualitative researchers stress the socially constructed nature of reality, the intimate relationship between the researcher and what is studied, and the situational constraints that shape inquiry. Such researchers emphasize the value-laden nature of inquiry. They seek answers to questions that stress how social experience is created and given meaning. In contrast, quantitative studies emphasize the measurement and analysis of causal relationships between variables, not processes. Qualitative forms of inquiry are considered by many social and behavioral scientists to be as much a perspective on how to approach investigating a research problem as it is a method.

The research uses both qualitative and quantitative analysis methods to achieve the required results.

Designing the Urban Study

For the purpose of this paper the urban analysis is defined as the process of gathering, analysing and presenting information on the extent of demographics, location and issues in
the Indian cities. This can then be used to generate a profile to bridge the gaps between the Experts, the Government and the people.

The data collected can also provide valuable insights to questions that address change in policy. It is important to understand that the conditions and the quality of life in Indian cities are not a static entity and hence the data collected can be seen as a start to understanding the issues of the people which will help to come up with possible interventions in the urban realm.

1. Setting up a demographic

   **Gender**
   **Age**
   **Professional Structure**
   **Location**
   **Migration**

The above are aspects that deal with numbers and are quantitative measures. The help in setting up a framework.

The location for instance gives you the extent of the survey. It helps in providing accurate information on where the people live and where the maximum concentration of the survey lie.

2. Urban Context - The issues

While the number of issues in a developing nation are many, there are specific issues more pronounced in urban areas. This helps in identifying areas that are particularly vulnerable and what the city lacks.

- Overcrowding
- Urban Sprawl
- Housing shortage
- Informal Settlements
- Inadequate public transportation
- Pollution
- Lack of safety regardless of gender
- Lack of safety for women
- Lack of infrastructure
- Traffic and congestion

Ranking the cities helps in understanding the magnitude of the issues in various cities. The questions of, What is the biggest problem in a specific city? And Does the magnitude of the issues vary in different cities across India? Can be answered by this section.

3. Identification

Quantitative measure are a start to identifying the profile of the survey. The quantitative data can then be used to get a more in depth qualitative analysis. The art of merging numbers with text.

This also paves the way to measuring the role of the Government. Issues in an urban realm are multi-dimensional. Measuring the issues in an accurate manner is one that is challenging. The quantitative method to show the ranking of the issues in terms of the magnitude can be referenced with the literature. When it comes to measuring the Government's role in terms of the issues a quantitative method is an ideal way to assess if the people feel the issues are being tackled.

4. Characteristics and Opportunities

Qualitative analysis can be employed in order to assess the characteristics and opportunities in the urban realm. In the case of this thesis data can be collected by obtaining the answers to a few simple questions such as.

- **Who do you think are the experts in dealing with the challenges in your city?**
- **If not the Government then who? Please mention any organisations or individuals making a change in a small or large scale in the city you live in.**
- **Would you like to participate in the planning process of your city?**
- **If you had the power to dictate change in your city, what would you change or incorporate?**
- **The future of India, which do you prefer?**

The first two questions help in deciphering where the trust of the people lie The next question helps in determining if there should be a possibility for the participation of the people in planning. The last two are hypothetical but they do help in determining where the frustrations of the people lie and what they would like to see in the future.

The answers to the qualitative section are interesting and open up a different dimension in comparison to the quantitative section. The qualitative part gives an opportunity to view the emotions of the people.

**USING THE SURVEY**

To justify conducting a nationwide survey. It is important to have a clear idea of the information to be collected and the application of the information. The collection of the information could lead to aiding in the following:

**Strategy Development**

Analysing the issues in the city can provide valuable inputs to city development in terms of providing strategies. The analysis helps in providing the identification of the main urban issues through quantitative measures and the qualitative aspects help in measuring the priorities of the people.

**Service delivery**

The role of the Government is to provide services to the people who live in the cities. This
is usually a huge challenge in Indian cities. There is a huge gap between what is expected and what is delivered. New approaches with new data can aid in improving services in cities. This analysis can serve as an effective tool in gathering data in designing and implementing new services.

Policy

The Government has issued various policies. It is important to monitor the impact and effectiveness of these policies. This analysis can provide vital information and an overview of if the policies implemented have created some amount of change in the urban realm and if not possibilities and suggestions can be made to change policies and implement new ones.

This section has been derived with references to other studies which involved surveys to map the urban conditions. References in this section are:

- The University of Reading Statistical Services Centre, (2001), Approaches to the Analysis of Survey Data, © 2001 Statistical Services Centre, The University of Reading, UK
Research Methodology:
This master thesis uses the investigative method of survey. The survey was circulated to people in various cities of India. The survey has been developed after keen observations of the urban environment in India. It involves questions based on the issues one experiences at the ground level.

The people who make up the city are the ones who experience the city everyday. Experiences as we all know are good and bad. The people who thrive in the Indian cities are experts in analysing problems they face everyday. The survey is targeted towards the people, in order to understand their perspectives of the city, the issues they face and their opinions. This is crucial as it looks into the minds of the client of the city.

The Survey
The results of the survey will help in deciphering the framework of the Indian city.

Establishing the Demographics

Gender
The first question is gender related. In India gender is an important aspect. Gender highly dictates how one experiences the city.

Q1. Are you?

- Male
- Female

65% of India is under the age of 35. India is a young nation and as the world ages, the average age in Indian cities is 28. (as per the Census 2011). This is clearly seen in the result where the highest percentage of people are between the ages of 18 to 29. This makes India a youthful, productive and a dynamic nation.

Professional Structure
While planners play an important role in cities, the city comprises of more than just planners, people in various professions comprise the cities of India. This question helps in establishing the professional structure.

Q3. Are you a?

- Student
- Professional
- Professional involved in the field of Urban Planning and Architecture.
- Other
In terms of profession, the survey has tapped into a high percentage of professionals, a highly educated sector in India. The literacy rate has soared from a mere 16% from the time of Independence to a 74%. (as per the Census 2011)

The city

India is large and comprises of various cities. Though the underlying problems of each city are similar the magnitude vary.

Q4. Which city do you live in?

- Chennai
- Mumbai
- Delhi
- Hyderabad
- Bangalore
- Kochi
- Calcutta
- Chandigarh
- Other

Migration pattern

Migration pattern from the rural to urban is one that puts a huge strain on cities. Establishing the current trend is vital to understand the urban environment.

Q5. Have you migrated from

- Rural to Urban
- Urban to Rural
- Rural to Rural
- Urban to Urban

Migration from rural to urban was a trend in the past, one of the previous generations of our fathers and grandfathers. The current population migrates from one city to another.

Q6. If you moved, please mention why below?

The rural to urban migratory population moved for better opportunities.

The rural and urban migratory population moved for better opportunities. The urban to urban move is related to jobs. There were a few which were quite absurd such as moving to the city to find love and one exclaiming that there is no place like the city, why live anywhere else. Overall, the trend is migration from rural to urban and urban to urban. A small percentage moved from urban to rural, they belonged to the age group of over 50 and claimed that they moved to get away from the polluted city.

India is made up of many cities large and small. The majority of responses were from the major Indian cities and a few from smaller upcoming cities as well.
The issues

The issues are the problems at ground level, issues that people face everyday. The top 10 issues in Indian cities visible to the naked eye are as follows:

- Overcrowding
- Urban Sprawl
- Housing shortage
- Informal Settlements
- Inadequate public transportation
- Pollution
- Lack of safety regardless of gender
- Lack of safety for women
- Lack of infrastructure
- Traffic and congestion

Q.7 What are the biggest problems in your city? (Rank the following)

<table>
<thead>
<tr>
<th>Overall Ranking</th>
</tr>
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<tbody>
<tr>
<td>Traffic and congestion</td>
</tr>
<tr>
<td>Overcrowding</td>
</tr>
<tr>
<td>Pollution</td>
</tr>
<tr>
<td>Urban Sprawl</td>
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<tr>
<td>Informal Settlements</td>
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<tr>
<td>Housing shortage</td>
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<tr>
<td>Lack of infrastructure</td>
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<tr>
<td>Lack of safety for women</td>
</tr>
<tr>
<td>Inadequate public transportation</td>
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<td>Lack of safety regardless of gender</td>
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</tbody>
</table>

In the overall ranking traffic and congestion tops the chart followed by overcrowding, pollution and urban sprawl.

India already has five megacities with staggering populations.

New Delhi- The capital city has a population of 18.6 million people
Mumbai- India's financial hub has a population of 21.4 million people.
Kolkata- An important trading hub, with 15 million people living in urban area.
Bengaluru- The 'Silicon Valley' of India; 10.5 million people call it home.
Chennai- Home of the Indian motor industry, has a population of 10.2 million people.

The high population contributes to all the issues in the cities. Every issue has an affect on the other and need to be tackled simultaneously.
Mumbai’s top issue is over crowding, something everyone is already aware of. This is followed by traffic and congestion and pollution.

Chennai’s major issue as per the experience of the people is traffic and congestion followed by overcrowding and urban sprawl.

Delhi’s top issue is traffic and congestion and lack of safety for women followed by safety regardless of gender and pollution taking the second place.
The Government’s role

The Governing body is a crucial entity to the functioning of a city. Life in Indian cities is on the fast track. Are the people in such fast paced Indian cities aware of the measures the Government takes to tackle the issues in their city? Do they feel that the problems are being dealt with?

Q8. Has the Government helped in mitigating the problems in your city? Please select the problems that have been addressed by the Government.

- Overcrowding
- Urban Sprawl
- Housing shortage
- Informal Settlements
- Inadequate public transportation
- Pollution
- Lack of safety regardless of gender
- Lack of safety for women
- Lack of infrastructure
- Traffic and congestion

The Government has set some goals according to the Urban initiative programmes. A set of initiatives were set from 1992-2014 and the current initiatives are as per the Urban Initiatives 2014. Question 8 addresses if the people feel that the initiatives are being implemented in the cities and if these problems are being dealt with by the Government.

The initiatives shows that the Government does understand some of the issues in the Indian city and are trying to implement change. The Indian Government has often disappointed the people, Do they still feel the same way about the Government or do they experience change in the cities?
Overall the citizens have been seeing changes in the urban realm. One of the biggest investments is in improving the public transport and we see that in every major city now.

The problem people face is that they see a small amount of progress but the progress is just not enough. That’s the major complaint in cities - the Government’s effort is not proportional to the need for change.
The Expert

In developing nations there are various players in the urban realm. This question helps in determining who the people trust.

Q9. Who do you think are the experts in dealing with the challenges in your city?

- The Government
- Local community experts and Community organisations
- International organisations such as The United Nations
- Other

In places like India it is often overwhelming for the Government, it is similar to a couple with two children as opposed to one with 50. So when the Government does not step in, the people and local community organisations fill the void. A majority deemed the local community as experts in dealing with the challenges.

Q10. If not the Government then who? Please mention any organisations or individuals making a change in a small or large scale in the city you live in.

This question paved the way for a number of organisations and people being mentioned. The void of the Government is filled by such organisations and the people. They take up the role of the Government out of their own interest in improving the urban realm. There are various organisations which address various problems spread out across India. Some of them are as follows:

The Chennai City Connect (http://chennaicityconnect.com/)

Chennai city connect believes that skillfully managing urban issues is the key to economic growth of cities and is vital to the quality of life of its citizens. Chennai is expanding rapidly due to migration from rural and semi-urban areas for job opportunities.

The residents of the city, industries and NGOs have formed the Chennai City Connect to effectively tackle the problems faced by Chennai due to rapid expansion in terms of transportation, housing and congestion. It helps government agencies with it's knowledge base.
Their Vision:
Transform Chennai into a world-class city that provides great quality of service and infrastructure to all its citizens.

The Chennai City Connect is a foundation that works to improve the urban realm in the city of Chennai but there are many such organisation in other cities which strive to do the same.

Bhumí (http://www.bhumí.ngo)
Bhumí is one of India’s largest independent youth volunteer non profit organisation. It aims to provide a link between the educated and uneducated. The volunteers mentor children from less privileged backgrounds and try to help them have a better future.

Their Vision:
To help build a more influential, equal and socially conscious society.

Their Mission:
Bhumí drives social change by fostering an environment where young adults & children learn, lead and thrive.

The Ugly Indian (http://www.theuglyindian.com/)
The Ugly Indian is a group of volunteers who fight for clean cities. They do not sermonise or confront anybody. The just do it.

Their guidelines are:
- No lectures, no moralising, no activism, no self-righteous anger.
- No confrontation, no arguments, no debates, no pamphlets, no advocacy.
- Don’t step on anyone’s toes, don’t take sides in any ideological debates.
- Support existing systems and improve their effectiveness for the greater good.
- Basically, get real. Treat everyone with sincerity, respect and dignity first, and the greater good will be an outcome.

We feel a ‘solution’ is a real solution only if:
- It sustains in the public street for at least 90 days.
- With no supervision.
- Is low-cost (ideally free) and easy to implement and replicate
- Changes the behaviour and attitudes of all concerned
- Creates minimal change in the daily actions of everyone concerned (nobody should lose a job, lose a source of income, or get seriously inconvenienced – because it takes only one Ugly Indian to undo the good work of a hundred others).

The above are three organisations which were mentioned by quite a few people. The Chennai City Connect works in improving urban infrastructure, Bhumí deals with education and community development and The Ugly Indian strives to improve the cleanliness in the urban realm by activating the community. This proves why people trust the community.

Some of the other organisations mentioned were:
- The Red elephant foundation.
- Angels of Marina.
- Lakshmi Nagar association
- Kannur Club
- Kudumbashree
- Local community
- Individuals
Participation

Most Indian cities are fast paced and large, a day for a professional usually involves long hours of travel to reach work followed by long hours at work and travelling back home in the dark hours of the night. Do they have time or the interest to participate in the planning process.

Q11. Would you like to participate in the planning process of your city?
- Yes 40.9%
- No 52.6%
- Maybe, but will my opinion matter 6.3%

Q12. If you had the power to dictate change in your city, what would you change or incorporate?

This is a question that is hypothetical but the answer to it gives us an understanding of what people really want to change or incorporate in the city. Below are few of the responses.
- Improve Infrastructure.
- Safety for women.
- Enforce Discipline.
- Get rid Traffic congestion.
- More green in the cities.
- Education systems.
- Civic Sense, Child Health & Education.
- Safe roads, safety regardless of gender, gender equality, safe infrastructure.
- Safety in each and every aspect.
- I would love to use the super-blocks method found in in Spain and also reduce the amount of space given to cars and traffic in our cities. Mass transportation should be the primary method of movement inside city limits and most roads for individual transport should be completely underground. The smart city initiative should be implemented country wide.
- Vertical farming in cities.
- More planned safe public spaces.
- Housing for all.
- Change the Government.
- Get rid of Corruption.

The responses clearly show where the frustrations of the people lie.

The Future

Q13. The future of India, which do you prefer?

- Biophilic cities- More green in the urban realm 30.6%
- The smart city initiative 25%
- Strengthening the rural areas that surround the city, moving away from the city 4.4%
- Other 30.1%

As human beings our mind is constantly in the future. The choices for the question are based on the fact that Indian cities lack green spaces and are highly polluted so, the first choice is of biophilic cities. The second of the smart city initiative is currently being employed with the promise of 100 smart cities. With constant migration from rural to urban is a reverse possible? Are people willing to move to the rural areas which are equally lucrative. What do people really want to see in the future?
The implications of the survey
A discussion

The survey unearths many interesting points. The survey was mainly taken by a large number of people from the age groups of 18-29, the youth. The migration pattern which was once from rural to urban has now shifted to urban to urban. The main reason for migration is for better opportunities.

The issues in urban India is one that people are aware of. The rankings clearly indicate the major issues in the cities. The results of this study can be further broken down.

Strategy Development

One of the major issues in the urban realm is overcrowding. Cities are swamped with people, the main reason for migration as mentioned above is for employment. The map on the left clearly indicates an uneven distribution of population.

When it comes to strategy development. Should we start spreading these opportunities?

For instance, cities pose as an ideal place to live with its glamour quotient but there are only a certain amount of opportunities in the city. The Government of India focuses much of its energy on urban India. The RURBAN Mission an initiative post 2014 has promised to accelerate rural development with urban services. Along with this shouldn’t the Government focus on strategies to create more opportunities in the rural areas as well? Empower the rural population and prove that the agricultural sector is as lucrative as any other sector in India.

“Empowering the rural areas along with the urban areas can release the burden on the cities.”

The strategy of distributing the population and creating opportunities in a wholesome manner could be a possibility. This could also lead to ensuring that the quality of life grows proportionally to the population growth.

Service development

There is no denying that the Government is trying to bring about change and that the people are seeing some amount of change in their cities. But is it enough?

The Government is unfortunately riddled in corruption. Though the officials are not all corrupt a majority of them are which makes it a task for development in a uniform manner.

There are a huge number of experts in the field of planning. Rahul Mehrotra voices his concerns on the lack of the practitioners in urban development.

The survey gives one an idea of what the cities lack by emphasising the main issues. So the question now is should India resort to new approaches to improve services and ensure development in a sound manner? Is it time to retire the old means and start fresh by involving the required professionals to improve the services?
Policy

People are seeing improvements when it comes to certain aspects. But there is still a long way to go. The general perception in India is that the people are indifferent as long as a minimum amount of services is made available to them for their everyday. But the survey clearly indicates that this generation is not at all like that. The citizens want to have a say in what happens in their cities and are clearly aware of their surroundings.

This leads to the questions of if the people should influence policy making? Policies are made for the people so shouldn’t they have a say in determining them at least to some extent?

This survey is a mere prototype to understand the mindset of the people. The results were more satisfying than what was expected and broke many stereotypes about the citizens of the country.

Some other interesting conversations created by the survey were:

- Personal queries stating if this can be used as a movement to create change in the cities.
- That there are many private organisations, community organisations and individuals which tackle issues to improve their regions.
- The willingness of the people to participate and their awareness towards the environment.

This gives one a feeling of optimism when looking at the future of India. The best critiques are the citizens and their willingness to take responsibility paints possibilities of a better India.

Some of the other aspects the survey unearths is as follows:

The Governing body in the city

In most cities you have the Governing body that supports its citizens but in places like India the support system is much larger, the voids of the Government are filled by other organisations which in turn support the people who thrive in them.
“Every issue has an affect on the other.”

In terms of dealing with issues shouldn’t it be done in a cohesive manner? Since a root issue can be causing another.

Overcrowding and sprawl

The more the people the more the city expands and this creates sprawl. The edge of the city is often miles and miles away from the center.

Overcrowding and Housing Shortage

A city has the capacity to only cater to a maximum number of people. When the limit is exceeded by a few millions there is an instant need for housing which the city cannot provide.

Overcrowding, Housing Shortage and Informality

The upper class and the middle class always find a residence to buy or rent. Those who cannot afford the high rents of the city live in informal settlements. Informal settlements are places in the city where dwellings are constructed illegally. The lack infrastructure and are often unsanitary places to live in.

Overcrowding and Inadequate public transportation

The buses and trains that run within the cities cannot support the hoards of people that live in the city. Travelling at peak times is often life threatening and in some of the cities you will find people dangling from the buses in order to the save time of waiting for the next one. Save time, either because they live so far away or because they do not know when the next bus will come.

Overcrowding, inadequate public transport and lack of safety for women

In overcrowded Indian cities it is hard to monitor every nook and cranny. There is either not enough of security forces or in some cases the security force does not care enough. Human beings by nature have an animalistic instinct especially when they know they are not being monitored. Overcrowding is one of the main reasons for the lack of safety in cities. Overcrowded, unmonitored spaces become a place of threat especially for women. Indian cities and the public realm in India is male dominated. This dominance of men creates discomfort for women in general. Cat calls and lingering eyes are a common everyday phenomenon for women. Inadequate transportation makes women an easy target for preying hands in buses and trains.
Conclusion

This project can be considered as an attempt to understand the views of the common man in the city, giving a voice to the voiceless. The people in the city play a major role in depicting the city they live in. This master thesis has led to more questions of what should be happening in Indian cities. Going back to answering the main research question of does the priorities of the Government align with that of the people? It is quite impossible to answer this question with a simple yes or no. The people do feel that the Government is making an effort towards creating better environments but the problem is that it is not uniform, they often tend to focus on a few issues while ignoring the others.

So, there is a huge gap between what the people want in their cities vs. the effort of the Government. So, should the nation start investing its time on questions which involve the following:

Can we evenly distribute opportunities across the nation?

Should we reverse urbanisation to a certain extent and empower the agricultural sector i.e the rural sector along with the urban? The rural and the urban need to grow together and support one another.

Indian cities are seeing tremendous economic growth. The wealth is unevenly distributed. India is creating a facade to attract global economies in doing so it is not tackling what’s on the ground level. Talks of India becoming the next world leader is all over the news, the next super power they say, but isn’t it important to strengthen our foundation and tackle the issues at ground level, address the fact that we are also super poor before building up to becoming a superpower. Shouldn’t our focus lie on investing in the people who live in India, empowering them and giving them the skills and tools to survive? The survey clearly shows that people are willing to participate, so shouldn’t they be involved in discussions of what they want in their cities.

In terms of policy, the Government should involve architects and urban planners as mentioned by Rahul Mehrotra. The policies should follow points that were rightly brought out by the World Urbanization Prospects: The 2014 Revision such as:

- Governments must implement policies to ensure that the benefits of urban growth are shared equitably and sustainably.
- Diversified policies to plan for and manage the spatial distribution of the population and internal migration are needed.
- Policies should be aimed at a more balanced distribution of urban growth.

India has to realise that many of its cities are dying and need to be revived in a cleaner, greener and people centric manner.

India’s biggest strength and weakness is the population. The major outcome of the survey is that the result proves that people are willing to participate and this kind of survey can be used to improve the conditions in the city.

It's time India starts asking the right questions!
The survey has had a response from 268 people from different parts of India and still remains open. It serves as a platform for the citizens of India to voice their opinions. This database can be used to involve the citizens in the planning process.

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