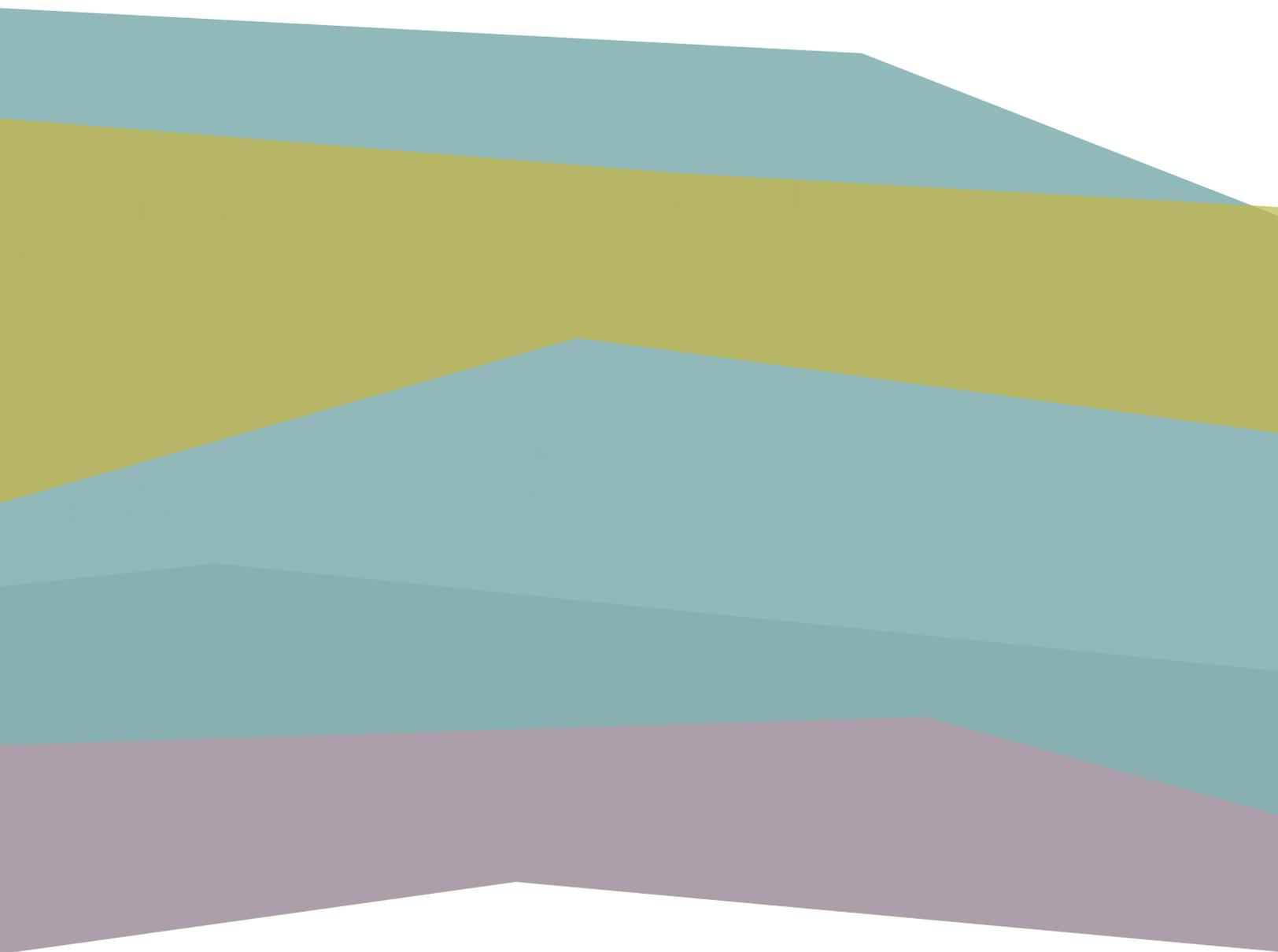


Transport Budget Analysis in 5 Indian Cities

Understanding the relationship between city budgets
and sustainable transport objectives



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Sustainable Urban Mobility Network

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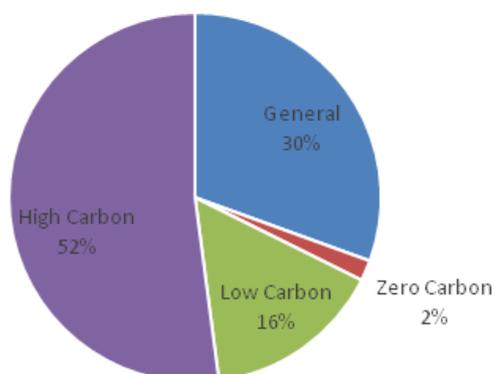
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Executive Summary

This study has been designed to bring out the linkages between budget allocations and sustainable transport. For this purpose, the budgets of the five cities of Ahmedabad, Bangalore, Chennai, Nagpur and Pune have been analysed to see how much money is spent on transportation in the cities, and more importantly the modal share of the transport expenditure. Broadly, five categories were used for finding out the modal share, namely, motor-vehicle related, non-motorised transport, public transport, mixed and general. The expenditure was also categorised into capital and revenue wherever the details were available. While this remained the broad framework, it was noticed that each city had a different budget format with varying level of details making the process of compilation challenging. Along with the budget analysis, an overview of the process of budget making and the role of stakeholders such as media, political representatives and officials was documented. Coherence of the budgets with statutory plans such as the comprehensive mobility plans has also been briefly commented upon in the report.

The budget analysis of these five cities shows some common trends of expenditure. As suspected, the share of expenditure on motor-vehicle related projects was the highest across the cities. Consequently, a carbon footprint analysis of the expenditure revealed that the five cities together spent a mere 18% on low and zero carbon and 52% on high carbon mobility.

Allocation of transport funds according to carbon intensity



This sort of analysis is not found in the reporting of the media, which was found to focus more on the issues of inflation of budgets, quality of roads, delay in implementation of motor-vehicle related projects such as signal free roads, road widening and flyovers. The issue of non-motorised transport or public transport doesn't find much mention in the media reporting on the budget.

The analysis also points to a problem of multiple agencies with overlapping and unclear functions, and with no formal means of coordination, which makes execution and planning of transport services difficult and piecemeal in nature instead of holistic. Consequently, the city budgets reveal poor compliance with the vision of sustainable transport or the goals of increasing public transport and non-motorised transport trips as stated in the plans. The report thus makes some important observations and recommends certain actions, as follows, to bridge this disconnect between planning and implementation for sustainable transportation in our cities.

1. It feels as if the municipal budgets are analysis averse. The variable formats of different cities, the difficulty in finding sector related allocations, the variable level of details and granularity in different city budgets as well as in the same city budget makes for a reader unfriendly document. Budget formats need to be readable, understandable and ideally uniform across cities in India.

2. No or little correlation is found between mobility plans made for the cities and their budget spending. At a larger level, in the absence of state urban transport policies, the principles of the National Urban Transport Policy are totally alienated from the planning process in cities. Until recently, municipal officials in transport related departments had no idea such a policy exists. Planning of transport related and possibly all types of expenditures is done in a monotonous cycle of accommodating spill overs from previous years and ad hoc, abrupt new projects without any cohesive vision for the whole city.
3. None of the cities have an outcome budget, leaving the job of performance audits to civil society organisations, activists and media. For any decision gone wrong, no accountability can be fixed, widening the scope of errors and ad hoc projects being taken up by cities.
4. There seems to be little synchronisation between the Ministry of Urban Development (MoUD) and the city level budgets. For the past couple of years, the MoUD has been actively announcing its support and encouragement to 'green mobility', 'low carbon mobility' and 'sustainable transport'. It has also come up with measurement criteria such as the Service Level Benchmarks¹ for urban transport which grades cities on their services for transport. But there is a huge disconnect between these and what the cities' budget allocations. One way of connecting these is through centrally sponsored schemes such as JnNURM and the Smart Cities Mission. However, from the experience of JnNURM, these mechanisms haven't unfolded too well either. The way to bridge this gap is to formulate state specific urban transport policies, which can then be made statutory through acts, instead of relying solely on circulars and announcements made by the MoUD from time to time.

There also exists the peculiar case of compliance to these norms, existing simultaneously with rampant non-compliance of sustainable transportation principles in general in the cities. For example, in Pune, while the city complies with JnNURM by executing BRTS, in the same breath a couple of 'non-CMP' flyovers are found in the budgets. So, it is important to look at not just what is being complied to, but also at what the city does in general when it comes to transportation.

5. In relation to the previous two points, there is a dire need of some mechanism to be established which can quantify the money being allocated for various categories of transport projects and how it correlates to the principles of sustainable transportation being endorsed by the MoUD or other plans like CMP. For example, when Pune's CMP states its goal to have 75% trips by public transport and NMT, there must be some mechanism to know how the budget allocations are geared towards this goal.

1 <http://www.urbanmobilityindia.in/Upload/Conference/fb4dd1bc-9402-4a41-81d9-1ef76dc02adb.pdf>

Introduction

Urban transport continues to be in trouble in Indian cities, with issues of congestion, pollution and safety getting worse day by day. The root cause of these, vehicular growth, both two-wheelers and cars, remains very high and the modal share of non-motorized transport and public transport continues to shrink. This is largely due to the absence of any coherent transport policy at the city-level. The de facto policy is to try and accommodate greater vehicular loads by increasing roads, building flyovers and developing parking lots. Traffic management focuses almost exclusively on moving vehicles, in terms of signal management, one-way streets etc. invariably at the expense of pedestrians, cyclists and public transport. Building bye-laws too favour more and free parking. Road widening, in particular, has severely affected urban tree cover; thousands of trees get axed to make more space for vehicles, often against massive public outcry.

The two most often cited problems with urban transport are the low levels of investment, especially in public transport improvement and the lack of a unified coordinating agency for urban transport, which is seen to be plagued by a plethora of governing agencies. While both these may in fact be true, it is also the case that cities spend a large chunk of their budgets on transport. However, the spending is not necessarily in line with the principles outlined in the National Urban Transport Policy, which emphasizes the need for improvement in public transport and non-motorized transport whilst reining in demand for private motorized modes through measures such as high-priced parking, congestion charging, vehicle-free areas etc. Comprehensive Mobility Plans made by cities, as a requirement for funding under the Jawaharlal Nehru National Urban Renewal Mission (JnNURM), have been either completely ignored or only implemented in a lop-sided manner. Specifically, cities have pursued projects which are not a part of the CMPs, essentially motor vehicle-centric ones.

The success or failure of NUTP, JnNURM and now the Smart Cities Mission rests largely on the ability of the Central Government to ensure that cities invest funds, not just the funds that they receive from the Central Government under these and other missions, but all the funds available to the city, in compliance with the overall policy of sustainable transport.

The current analysis looks at the Municipal budgets of 5 cities and attempts to find out the answer to some critical questions:

- How much do cities spend on transport in absolute terms and as a proportion of their entire budgets
- How is the money spent – on motor-vehicle centric projects or for improvements to public transport and non-motorized transport infrastructure

The study links these broad categories of projects to their carbon intensity. This is essential to understand if cities can indeed control their carbon emissions and help the nation fulfil its commitments to national mitigation targets.

The study also looks at the process of budgeting. The absence of any guidelines for municipal budgets means that the money gets allocated through an essentially ad hoc process. Unlike Central Government and to an extent State Government budgets, which are linked to 5-year plans, stated outcomes and subject to annual plans, municipal budgets are completely at the whim of the city administration and councils. The extent to which people are involved in the budgeting process and the media coverage was also considered.

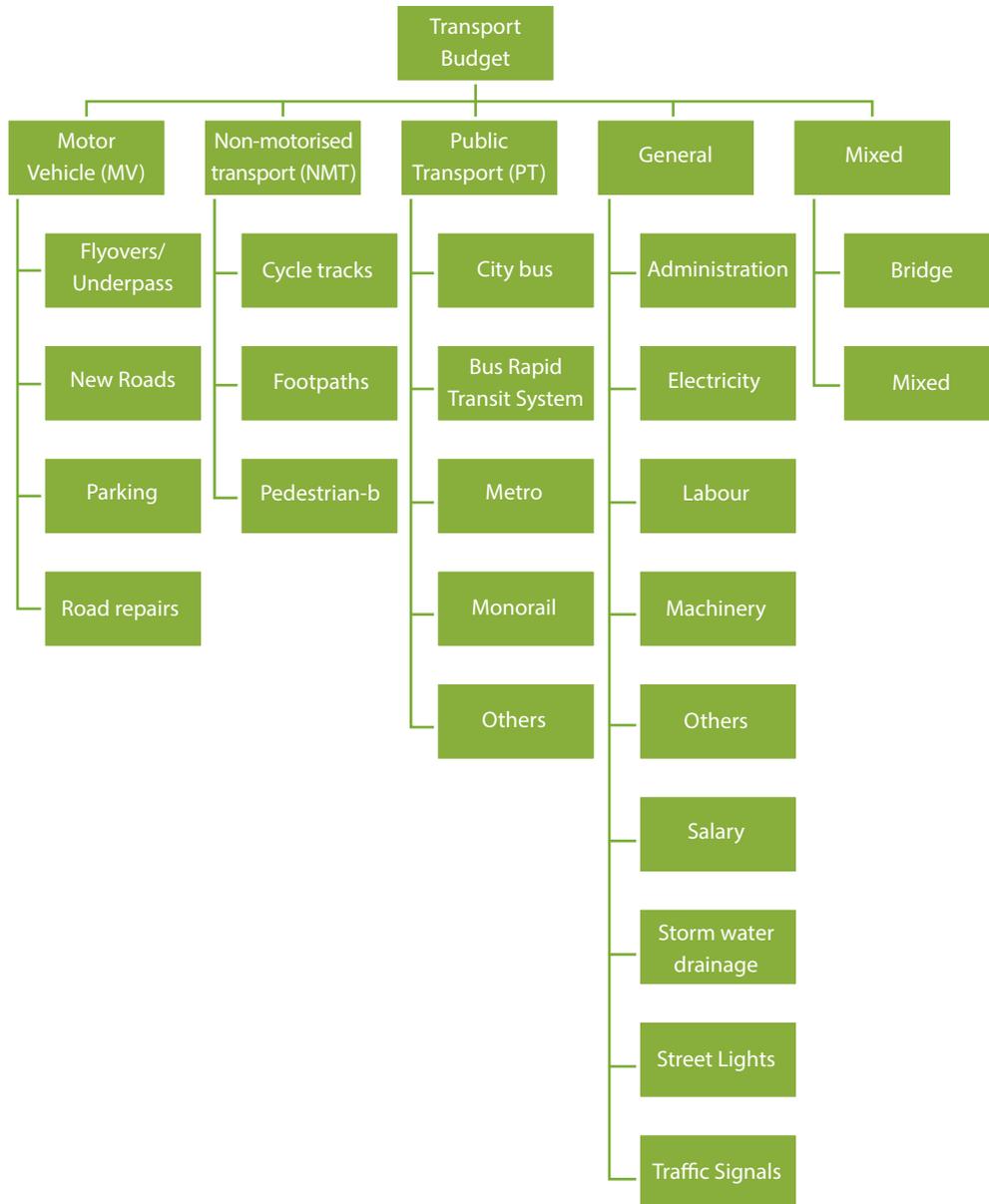
Scope and Methodology

The study was limited to the urban transport component of the municipal budgets. Accordingly, the actual transport expenditures made in the years 2012-13, 2013-14, 2014-15 and the proposed expenditure for the year 2015-16 was considered wherever available. It is important to understand here that the municipal budget has different versions in the process of its finalisation. There is a Municipal Commissioner's budget, followed by the Standing Committee version after which the final budget is brought out which is discussed and approved by the General Body of the municipal corporation. This last version however, is still the 'proposed' budget and the actual expenditure made against this can be found only when the year ends, when actual expenditure is recorded. For this analysis, these actual expenditures have been considered.

These actual figures were then segregated into basic categories such as Revenue and Capital Expenditure, Plan and Non-plan entries, and then into a very detailed segregation for the transport related entries which is discussed further. At the outset itself, significant differences were found between the formats of the budgets of different cities, making it difficult to normalise the data for comparison. For example, while it may be expected that any budget should have clearly marked out revenue and capital expenditures, the Bangalore Municipal Budget document does not have a clear demarcation of revenue and capital expenditure and income, making it difficult to accommodate it in certain graphs. Similarly, the isolation of transport related entries was a tedious job owing to again different formats in different cities. Some cities like Pune have all the transport related entries in a compiled 'Urban Transport Fund' (UTF), whereas other cities had no such provision. The level of detail in each of the budgets varied tremendously. The absence of accessible soft copies of the budget in an excel sheet or similar editable format meant that considerable amount of time was spent manually looking for the required data from the voluminous budget document.

This data that was thus isolated was then categorised in the following elaborate categories to understand the share of each.

Figure 1: Categorization of transport budget



The criteria for each of these categories can be found in the Annexure.

In addition to the quantitative analysis, other factors that may have a correlation to the transportation in the city were also studied such as the institutional set up, role of political representatives and media in budget making. This was done through research, literature review and stakeholder interviews.

The limitation of the analysis is that the scope was restricted only to the municipal budgets thus excluding the budgets of the multiple agencies delivering urban transport services. Hence what we have is a partial picture of the funding in the transportation sector. For example, money over and apart from the that in the municipal budget is being spent in the form of SPVs for infrastructure projects, public bus system corporations and railway services in the case of some cities.

Institutional features, political set up and their impact on budget

The state of urban transport in the city is also in large parts a reflection of its institutional set up. The number of institutions involved in providing for urban transport facilities, their capacity and the coordination between them directly affects how the city tackles its transport issues. Following were the notable observations regarding the institutional set up in the five cities studied;

1. In cities with multiple planning and implementing agencies for urban transport, lack of coordination and clarity in scope of work were observed. Notably, the cities of Bangalore² and Nagpur suffered from this overlapping multiplicity of planning and implementing agencies. In the case of Nagpur, the overlapping functions and powers of the Nagpur Improvement Trust and the Nagpur Municipal Corporation, both of which are headed by IAS officers have caused friction for long. The move to dissolve NIT and shift the functions to NMC has now been made in 2016³.
2. Parastatals, wherever existing such as Metro-Link Express for Gandhinagar and Ahmedabad Company Ltd. (MEGA) in Ahmedabad and Karnataka Urban Infrastructure and Development Corporation (KUIDFC) in Bangalore have little or no citizen and/or local representation and involvement in their working.
3. The role and influence of ruling party on the institutions involved in urban transport cannot be ignored. For example, in Bangalore it was observed that whenever the ruling party in the BBMP and in the State Government are the same, the district-in-charge minister and the Chief Minister also have a large say in deciding transport projects. For instance, the current Bangalore Development Minister, K.J.George was aggressively pushing for the 1700.00 crore steel flyover⁴ in Bangalore, which has now been kept on hold due to strong citizen and civil society opposition.
4. Pune has been a unique case with the municipal corporation being the sole entity for planning and providing urban transport in the city. While Pune is free of the influence of any para-statal agencies (there being no functional Regional Development Authority), one of the state agencies that has had a negative influence on the transport scenario has been the Maharashtra State Road Development Corporation (MSRDC). Brought in to implement the so called "Integrated Road Development Project for the Pune Metropolitan Region" the Government of Maharashtra sanctioned a comprehensive project package at a cost of 260 crores which included 33 works in which there were 6 road improvement works, 9 Railway Over Bridges, widening of 1 Railway Over Bridge, 2 River Over Bridges and 15 Flyovers. The legacy of the flyover projects proposed by MSRDC is being faced even today, as many of these were added without any justification to the more recently sanctioned Comprehensive Mobility Plan (CMP). It is only disputes between the PMC and MSRDC over payments that have fortuitously stalled many of these ill-advised projects. The General Body of the Pune Municipal Corporation approved the Comprehensive Mobility Plan in May 2012, almost 4 years after it was first tabled in the city council (aka General Body). While approving the plan the following proviso was added, "the General Body will have the authority to make changes in the Comprehensive Mobility Plan made as per the guidelines of the Central Government and approval is given for any changes made by the General Body from time to time to be incorporated into the report." This statement nullifies the sanctity of the plan,

2 <http://www.cstep.in/uploads/default/files/publications/stuff/f752307a5b273a0d2d9988e58e4f93a1.pdf>

3 <http://www.nagpurtoday.in/nagpur-improvement-trust-dissolved/12271830>

4 http://timesofindia.indiatimes.com/articleshow_comments/54772282.cms?from=mdr

by empowering the General Body to supersede the plan endlessly in an ad hoc manner. This is also reflected in the actual implementation of the CMP - firstly most projects in it have not been implemented and projects not in it are being implemented. Secondly, PMC even went to the extent of filing an affidavit in the HC stating it the CMP was only a guideline and not binding on the Corporation⁵.

Understanding and approach of political representatives on transport and budget

1. The role of local corporators in what gets into the transport budget was found to be significant in these cities. These projects were largely dominated by the need to 'solve' citizens' traffic woes (usually meaning *traffic congestion*) and visible infrastructure being built which could be used for political mileage.
2. The understanding of transport or sustainable transport in the local political representatives was found to be very low. The preference and pursuit of wider roads, more flyovers overcame the meek if existent demands for good public transport and non-motorised transport facilities.
3. The ward restricted approach of local corporators meant that they had no holistic vision for the city, thereby creating disconnected pieces of infrastructure in the city with no unifying plan.

5 "War of words over transport plan", October 2013

<http://timesofindia.indiatimes.com/city/pune/War-of-words-over-transport-plan/articleshow/23858435.cms>

Process of budget making

In all the five cities which were studied, standard procedures for budget making in the respective Corporation Acts were followed with variable timelines.

A general pattern wherein the various departments prepare their budgets and works and submit it to the Commissioner is followed in all the cities. The Commissioner, on the receipt of these individual budgets, prepares a consolidated budget for the consideration of the Standing Committee. The Standing Committee may make changes they feel appropriate, after which the budget is tabled for the councillors to discuss, debate and finally approve. In general, the Standing Committee is the most powerful body in Municipal Corporations as per their respective Municipal Acts, responsible for all the decisions pertaining to municipal finance matters.

There is variation in the cities with regards to the public consultation component in the budget making process. For example, in the case of Bangalore, the Karnataka Municipalities Act and rules mandate seeking of public opinion, whereas, the KMC act, which the BBMP is required to follow makes no such mention.

However, the chairperson of the Taxation and finance standing Committee do conduct such meetings sometimes. In a stakeholder interview, Mr. M.K. Gunashekhar (corporator), felt that public consultations do need to happen in the interest of transparency. However, the Chief Accounts Officer when interviewed mentioned that since the corporators are the elected representatives of the people, they act like the voice of the people and it is OK not have public consultations. There are records of various chairpersons conducting such consultations though. For instance, before presenting the 2016-17 budget, the chairperson of the T&F committee, Mr. Shivaraju conducted a consultation with journalists as well⁶. Mr. Muneendra Kumar, chairperson the T&F committee conducted a consultation with several NGO representatives in 2012⁷. In 2001, Bangalore became the first city in India to implement participatory budgeting due to efforts by a local NGO, Janaagraha. The campaign resulted in citizens' budget priorities being approved in over 20% of the city's wards but as time passed, the concept lost its ground in the city⁸.

In 2006, Pune implemented Participatory Budgeting for the first time in the city and attracted a massive response from the citizens. The share of transport related items in the participatory budget has consistently been the highest over the years.

6 <http://bangalore.citizenmatters.in/articles/bangalore-journalists-give-inputs-for-bbmp-budget>

7 <http://www.civicspace.in/civic/history>

8 <http://southasia.oneworld.net/news/participatory-budgeting-in-india-the-pune-experiment>

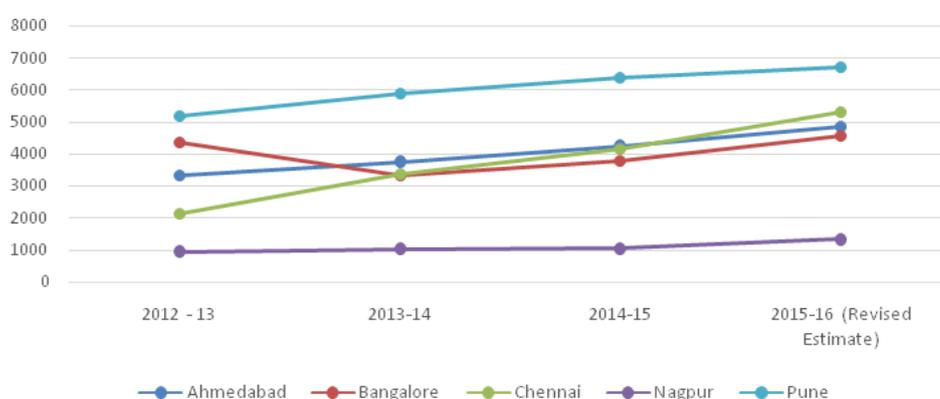
Comparative analysis of transport budgets

Total Expenditure of Cities

To get a sense of the transport expenditure as a part of the whole municipal budget, some basic analysis was done. This includes the share of transport in the total budget, share of capital as part of the expenditure, along with per capita spending, in each of the cities. The following graphs bring out the results of this basic analysis.

Graph 1

City Budget Expenditure Totals (2012-16)
(in Crs)



Pune, consistently had the highest expenditure across the cities. The remaining cities swap places through the four years of comparison. Bangalore starting at 2nd highest, finishes lowest, Chennai, starting lowest and finishes second. In absolute terms, Pune's budget expenditure in 2012-13 was 1.6 times that of other cities. In subsequent years, the budget expenditure of all cities grew, reducing the gap with Pune to 1.3 times their budget. One of the main reasons for Pune's high expenditure is the fact that the Pune Municipal Corporation is the sole planning and executing agency in the city. In a recent development, a Metropolitan Development Authority has been constituted, but it has limited ambit and powers⁹.

Table 1

City	2011 Census Population	CAGR	2016 Population Estimate
Ahmedabad	55,77,940	4.70%	70,21,569
Bangalore	84,25,970	3.90%	1,01,91,054
Chennai	46,46,732	1.50%	50,08,313
Nagpur	23,98,165	1.60%	25,97,534
Pune	31,24,458	2.10%	34,51,789

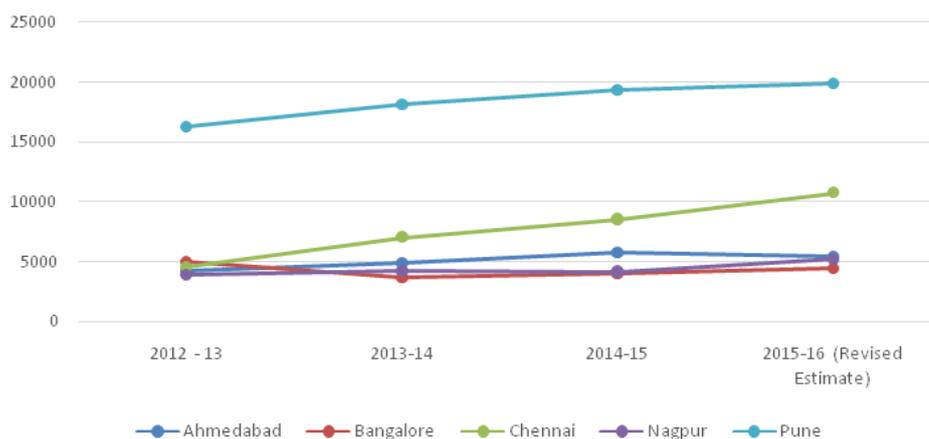
*The population of the cities were calculated based on the population recorded in Census 2011 and the Compound Annual Growth Rate (CAGR) of population for each of the cities

9 <http://timesofindia.indiatimes.com/city/pune/haphazard-growth-in-region-as-pmrda-remains-toothless/articleshow/58350727.cms>

A comparison of this sort across cities needs to address the issue of parity between comparisons, as each of these cities have varying sizes and populations. A city with a large population would find it easier to raise greater revenues through a larger tax base, simultaneously there would also be a greater demand on its expenditure. Secondly, the responsibility of municipal services is also primarily towards the people it serves, and hence population of the city is a prudent basis to standardise comparisons between cities.

Graph 2

City Budget Expenditure Totals (2012-16) (per capita)



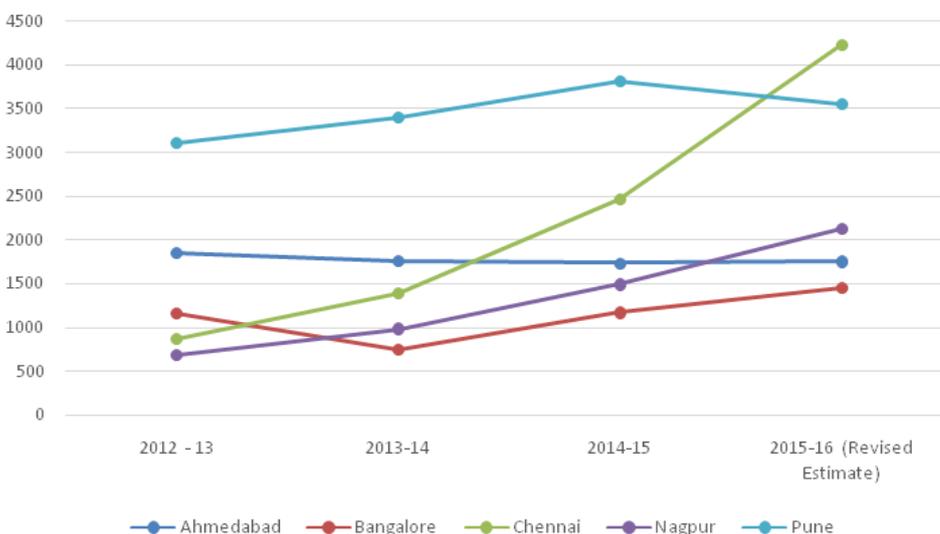
The overall budgets of the city when compared using per capita expenditure, reveals that other than Pune, all other cities had similar expenditure in 2012-13. Pune’s per capita expenditure is almost 3 times that of the other cities. In subsequent years, Bangalore and Ahmedabad seem to have maintained the same per capita expenditure, while both Pune and Chennai increase it. In 2015-16, the gap between Pune and Bangalore and Ahmedabad increased to 4 times their per capita expenditure, while Chennai reduced the gap to 2 times.

Since these comparisons are based on per capita expenditure, they provide a more realistic sense of the significance of the expenditure, all comparisons in this study use expenditure per capita as the unit.

Transport Expenditure of Cities

Graph 3

Transport Expenditure of Cities (2012-16) (per capita)

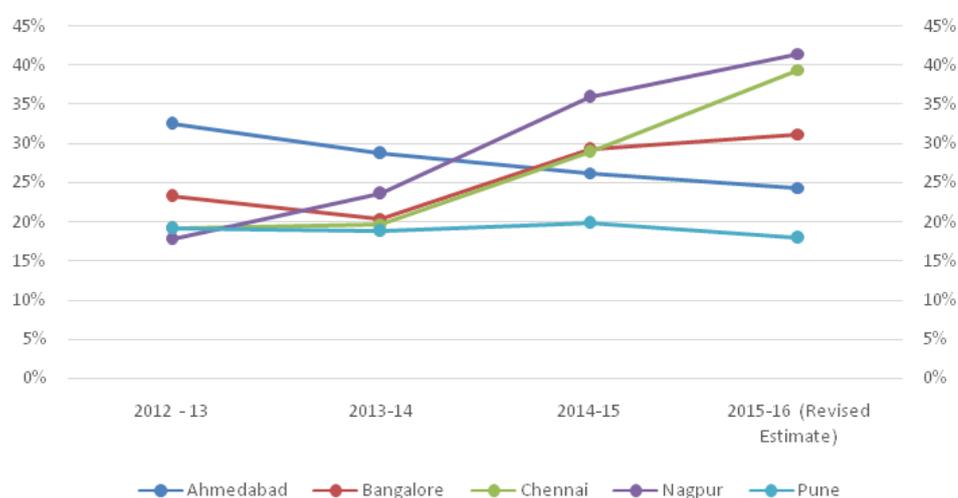


Like overall budget expenditure, Pune has the highest per capita expenditure on transport for the first 3 years of comparison, with Chennai making the greatest change, moving from second last position to first, with a greater than 4 times increase in per capita expenditure. This drastic increase is due to the increase in capital works that followed the expansion of the city boundaries in 2011. There has been an increase across departments (roads, education, health). Expenditures for street light installation and electricity increased 153% and 88%, respectively, from 2012/13 to 2015/16. In the same period, expenditures increased for storm water drainage (449%), culverts (3378%), concrete roads (535%), asphalt roads (389%) and pavements (121%). The expansion of the city from 174 sq km to 426 sq km to include several towns and villages. The Council accordingly decided to improve the infrastructure in these areas and initiated the Mega City Scheme. The city also had JnNURM funds that it had to spend by 2014 but which went on till 2016-17. This is the reason why capital expenditure increased rapidly in this time frame.

Bangalore has the least per capita expenditure among four cities, although it started at 3rd position. Except for Ahmedabad, all other cities have increased their expenditure over the period of 4 years.

Graph 4

Transport as a share of total budget



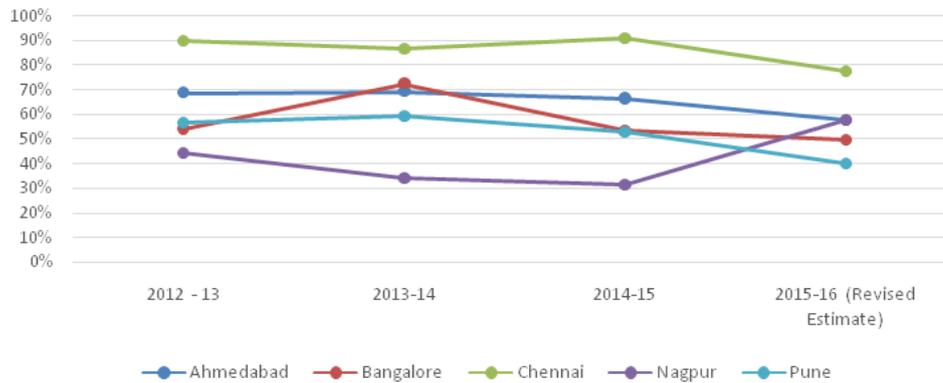
The transport budget expenditure of cities varies between 20 - 40%. In 2012-13, Ahmedabad had the largest share of its budget dedicated to transport at 32%, rest of the cities have an expenditure of transport close to 20% of the budget. However, the share of transport in the budget of Ahmedabad has been reducing constantly since, while that of Bangalore, Chennai and Nagpur have been increasing since 2013-14. Pune's expenditure on transport has remained fairly consistent at 20%.

The per capita expenditure of a city is also dependant on the scope of work that is undertaken under the municipal transport budget. Certain cities, such as Ahmedabad run city bus services out of their municipal budgets, whereas Bangalore has a separate state agency (BMTC) to manage buses services. Therefore, it is possible that a city such as Bangalore will seem to have a lower transport budget expenditure than Ahmedabad, yet due to additional expenditure by other agencies, have a combined effect of better transport outcomes than Ahmedabad does. This is a limitation of this study. It is hoped that in subsequent studies, all types of transport expenditures within the city may be included in the comparison, to reflect a more realistic scenario.

Share of Capital in Transport Expenditure

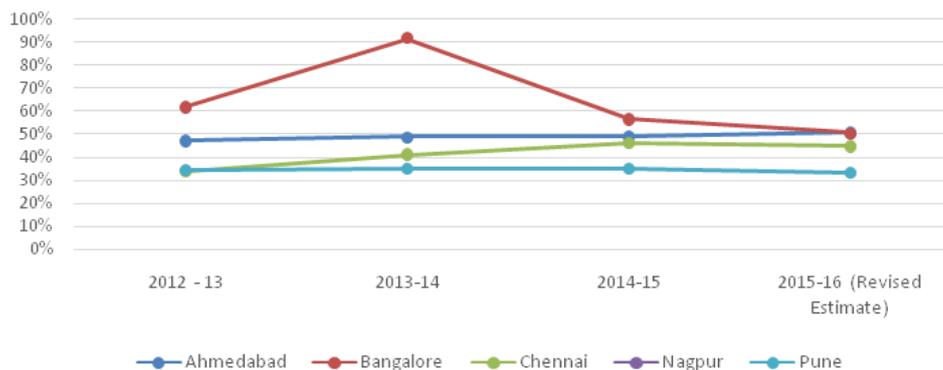
Graph 5

Capital as a share of Transport Expenditure



Graph 6

Capital as a share of Total Budget



Nagpur budget details did not reveal the share of revenue and capital in expenditure clearly for the years included in this analysis.

Capital expenditure is a large part of several city's transport expenditure. It varies between 40% and 90%. Chennai has the highest and Pune the lowest share of capital expenditure in Transport. In general, capital expenditure as a large share of the expenditure is indicative of large infrastructure projects been undertaken in the city. The graphs also show a tapering since 2013. A possible explanation is the termination of the JnNURM grant which was to be utilised as a capital expenditure.

A comparison of the share of capital in transport expenditure and total budget reveals the priorities of cities. Pune and Ahmedabad's capital expenditure on transport is proportionately marginally more than its expenditure in the overall budget. This reveals that capital expenditure in the transport sector is higher than the norm. However, in the case of Chennai, the capital expenditure in transport is very high, ranging near 80%, while that of the total budget is around 40%. This indicates unusually high capital expenditure on transport in Chennai.

Details of Transport Expenditure in Cities

The various budget heads related to transport were classified into five categories based on the mode of transport benefited by the expense. These classifications are: General, Mixed, Motor Vehicle (MV), Non-Motorized Transport (NMT) and Public Transport (PT). General category had entries that benefited all modes of transport, such as staff salaries, office expenses, electricity, machinery, street lights and traffic signals. Mixed category was expense that benefited more than one mode of transport, while not benefiting all modes, such as bridges. MV expenditure included those for the construction of new roads, parking structures, flyovers, and their maintenance. NMT were those expenses solely for pedestrian and bicycle infrastructure, such as cycle tracks and pavements. PT expenses were those that were spent or transferred to mass transit service providers, such as AMTS (Municipal Bus Service), BRTS and Metro.

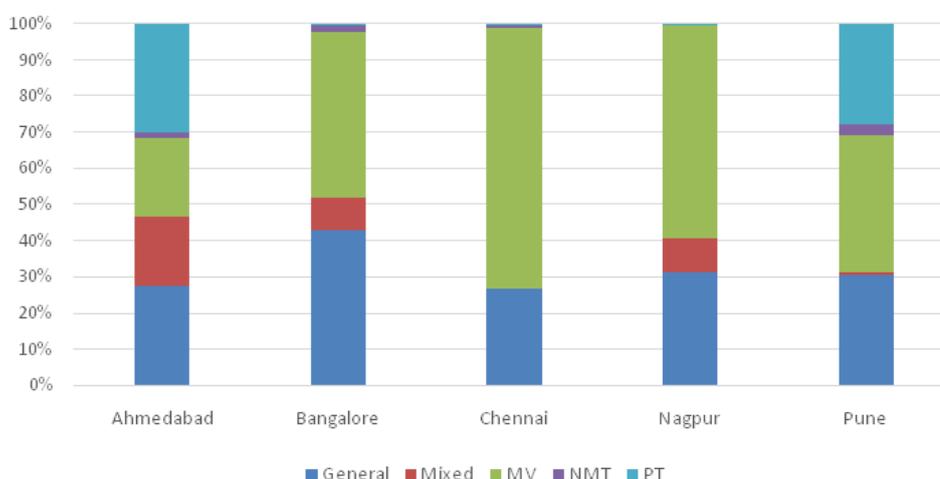
This study compares data across 4 years, from 2012-13 to 2015-16. To simplify the analysis, the city comparisons use the 4-year average of expenditure in each classification and sub-classifications.

Transport Expenditure by Mode

Among the 5 categories, the greatest expenditure occurs on MV at 45% of the 4-year average of all cities combined. Among MV expenditure, Chennai and Pune spend close to 2 to 3 times more than other cities. General expenses are the second largest expenditure category, with 30% of the expenditure of all cities combined. Pune spends considerably more on General expense than other cities. The third largest expense is on PT, amounting to 15% of expenses of all cities combined. However, only Ahmedabad and Pune spend on PT, as the city bus services in these cities function with municipal funds. PT expenses are a large part of the transport expenditure of Ahmedabad and Pune, amounting to 30% and 28% of their transport expenditure over 4 years, respectively. Mixed mode expenditure follows at 7% and NMT is last with 2% of the transport expenditure of all cities combined. It points to a dismal level of significance given to NMT infrastructure in our cities.

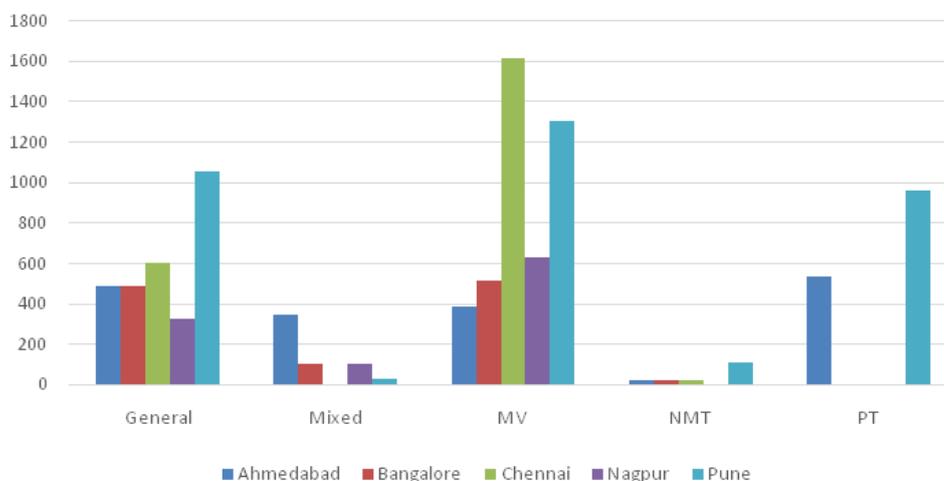
Graph 7

Transport Expenses by Modes (4 year average - per capita)



Graph 8

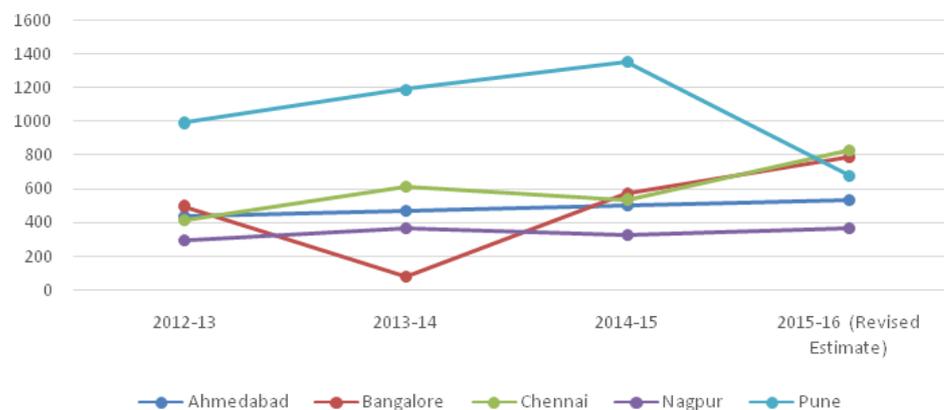
Transport Expenses by Modes (4 year average - per capita)



General Category Expenditure

Graph 9

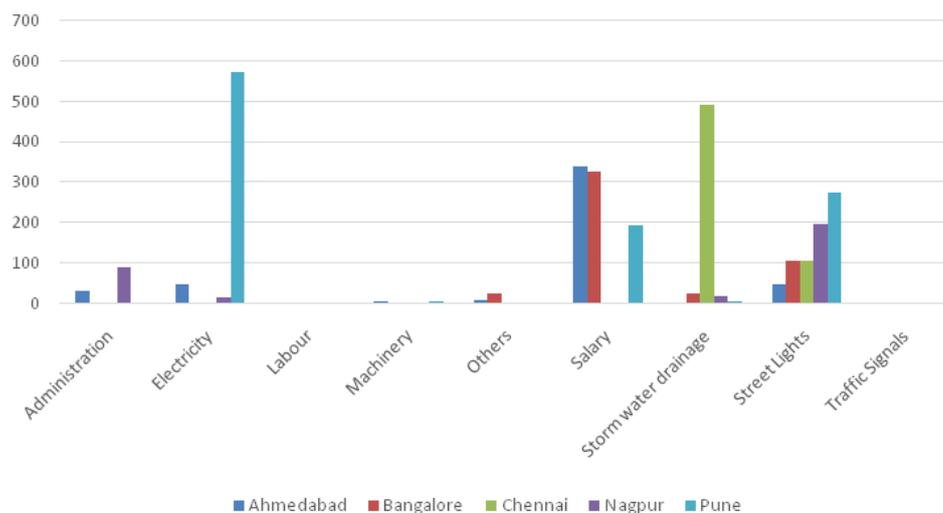
Trend of General Category Expenditure



General expenditures are those that benefit all modes. Except for Pune, most cities spent between 300 and 500 rupees per capita on general expenses, while Pune spent considerably more, at Rs. 994 per capita in 2012-13. Most cities increased their general expenses marginally over the 4 years, except for Pune, which reduced its general expenses greatly in 2015-16, bringing it down to comparable levels of other cities, between Rs. 500 and 800 per capita.

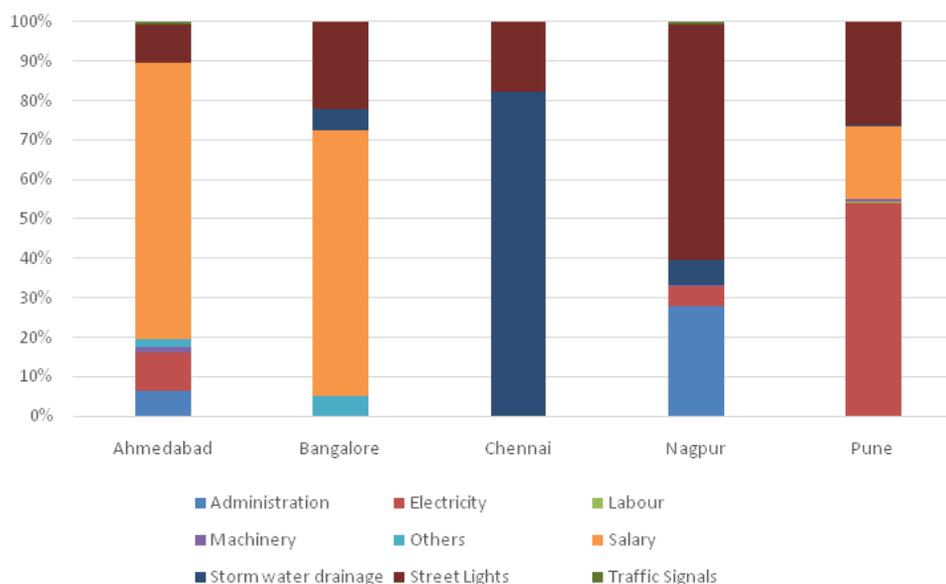
Graph 10

General Category in Detail



Graph 11

General Category in Detail



Salaries (24%) and Street lighting (20%) were the greatest sub-category of expenditure in the General Category. Ahmedabad and Bangalore spent more on salaries than on other expenses. In street lighting, a large variation exists with Ahmedabad spending the least, Pune and Nagpur spending the most. Pune spent more than half its general expenses on Electricity; similarly, Chennai spent 82% of its general expenses on storm water. In all cities, Administrative and other expenses were just a small fraction of the general expenses.

Motor Vehicle Expenditure

Motor Vehicle category includes all expenditure that would primarily benefit motor vehicles, which includes flyovers, new roads, parking and road repairs. In 2012-13, most cities spent almost the same amount (~ Rs. 500 per capita) on expenses on motor vehicle infrastructure. Only Pune spent more than other cities. Over the years, Pune, Ahmedabad and Bangalore have held their expenditure constant. Nagpur doubled its per capita expenses in 2014-15, the same year in which Chennai began a steep growth to finish in 2015-16 by spending 7.4 times more than in 2012-13.

Graph 12

Trend of Motor Vehicle category Expenditure

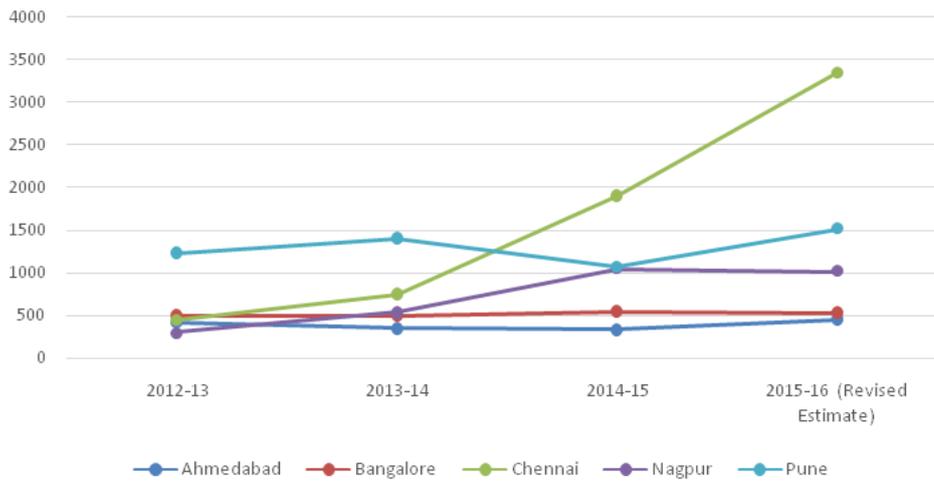


Chart 1

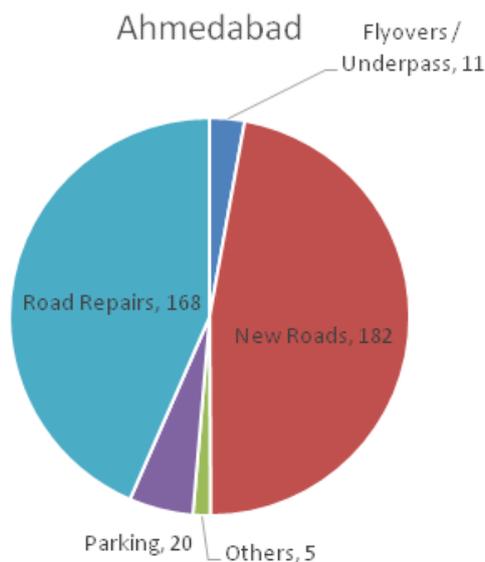


Chart 2

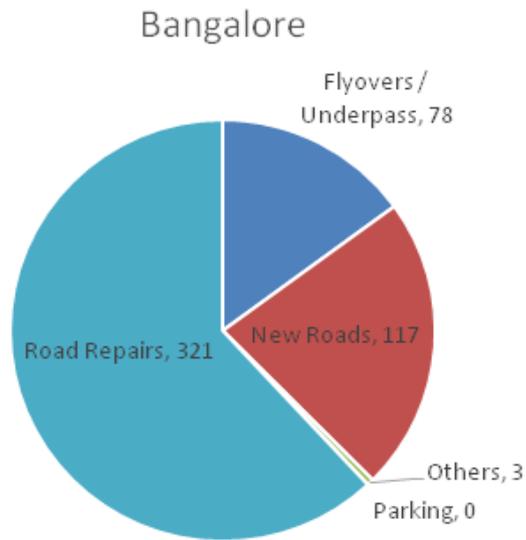


Chart 3

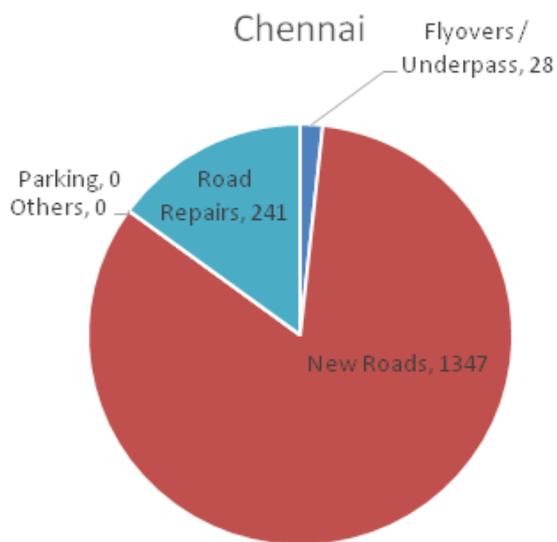


Chart 4

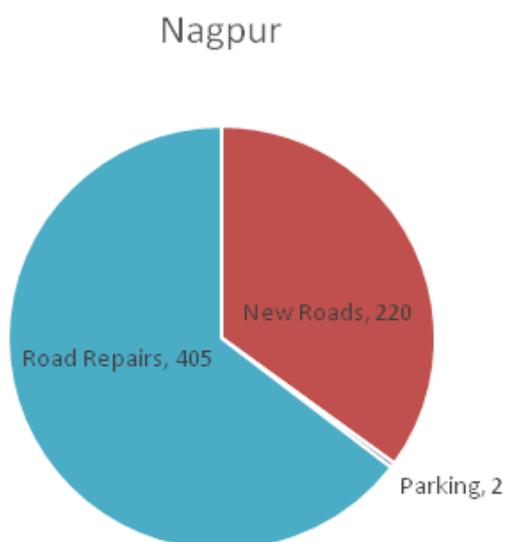
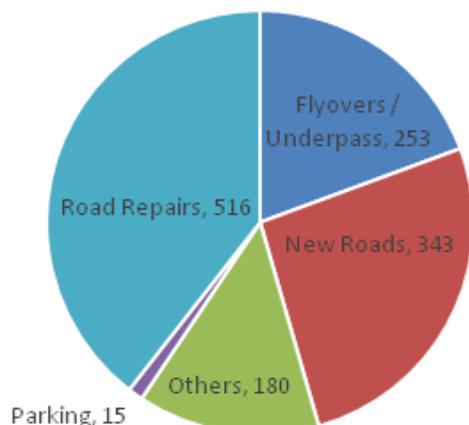


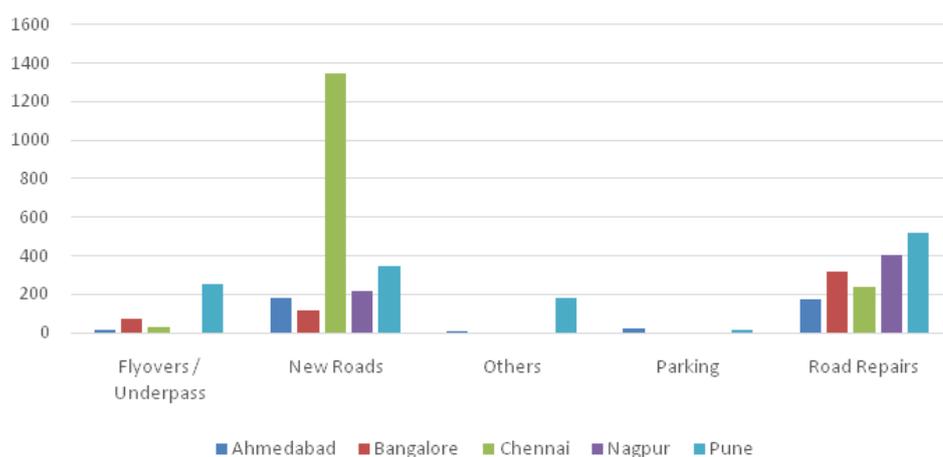
Chart 5

Pune



Graph 13

Motor Vehicle in Detail



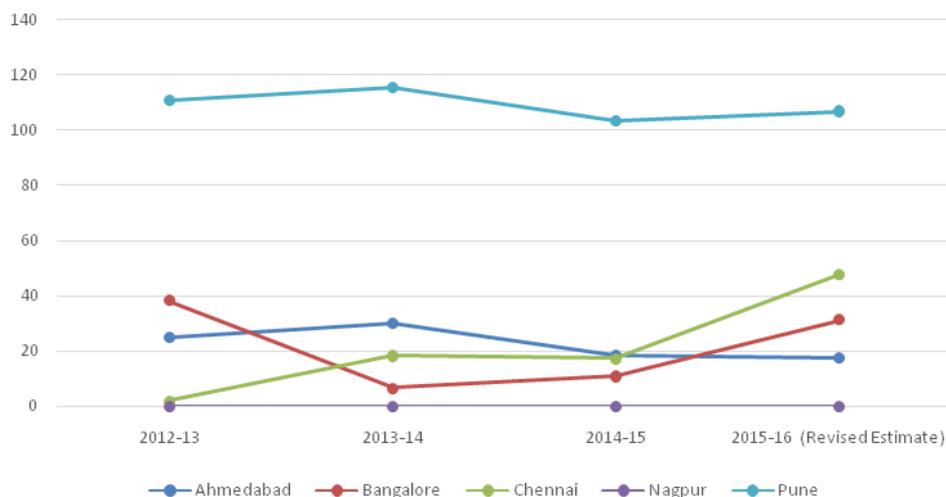
New Roads (49%) and Road Repairs (37%) were the large expenditure sub-categories of Motor Vehicles. Chennai spent Rs. 1347 per capita i.e. 83% of its expenditure on New Roads, while most cities spent between Rs. 180 to 350. With road repairs, most cities spent between Rs. 150 and 520 on with Ahmedabad spending the least and Pune the most. Pune and Bangalore also spent a large sum on building flyovers / underpass.

Non-Motorised Transport Expenditure

Non-Motorised transport expenditure includes expenditure that would benefit modes such as cycling and walking. As with other expenses, Pune spends considerably more per capita on NMT expenditure than other cities. The remaining cities range between Rs. 40 per capita expenditure, with Nagpur spending no amount on NMT. Ahmedabad had the second highest expenditure on NMT in the years of 2013 – 15, finishing last in 2015-16, with Chennai and Bangalore raising expenditure slightly on NMT in the last year.

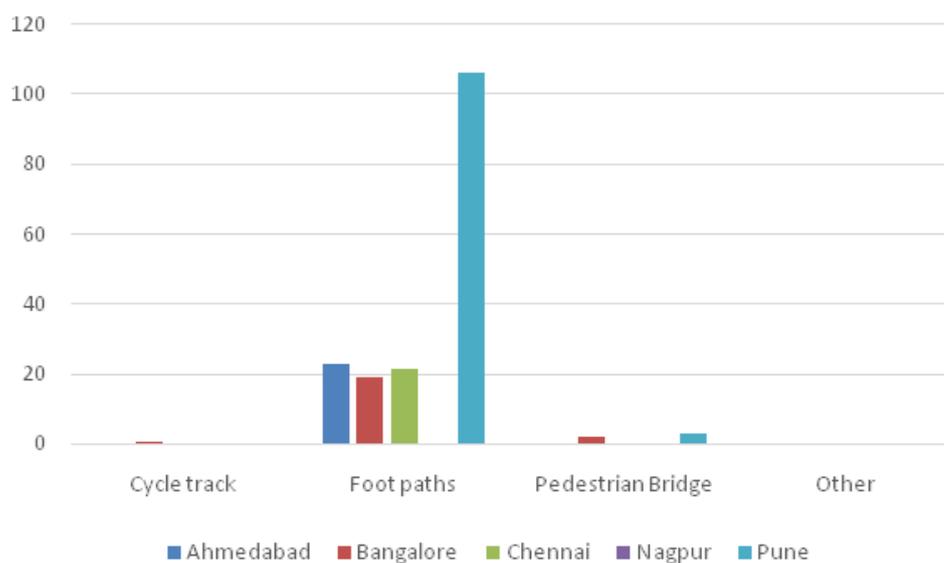
Graph 14

Trend of NMT Category Expenditure



Graph 15

NMT Category Expenditure in Detail



Footpaths were the major expenditure in this category, with 95% of all expenditure being made on it, a marginal amount was spent by Bangalore and Pune on Pedestrian Bridges and cycle tracks. In comparison with other cities, Pune spent more than 5 times the expenditure of other cities on NMT.

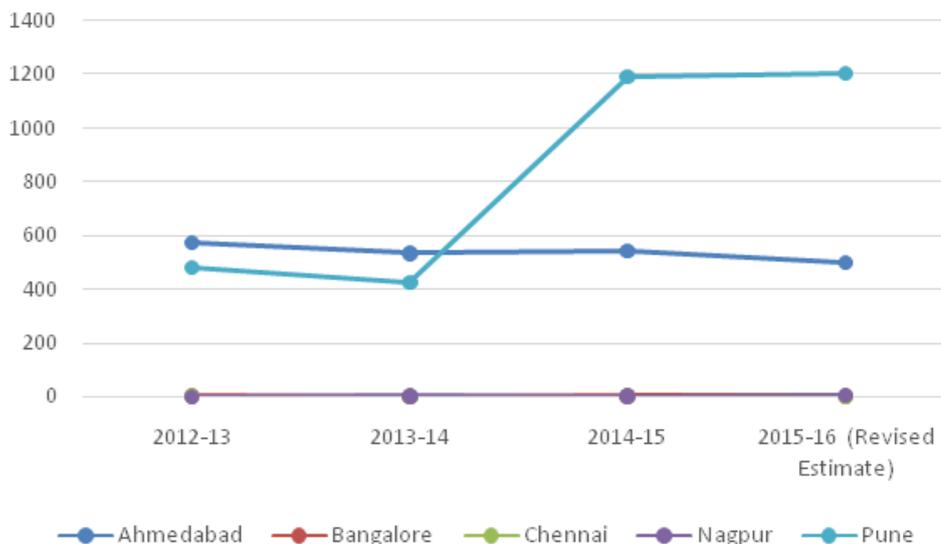
In Nagpur, as per the budget entries no money was spent on footpaths or any non-motorised transport projects. This may also be because of the absolute lack of details in the budget entries.

Public Transport Expenditure

PT category includes expenditure on all modes that benefit PT such as on city bus services, BRTS, metro and monorail. Only the cities of Ahmedabad and Pune spent on PT. Between the years of 2012-14, they spent almost similar amounts, around Rs. 500 per capita.

Graph 16

Trend of Public Transport Expenditure

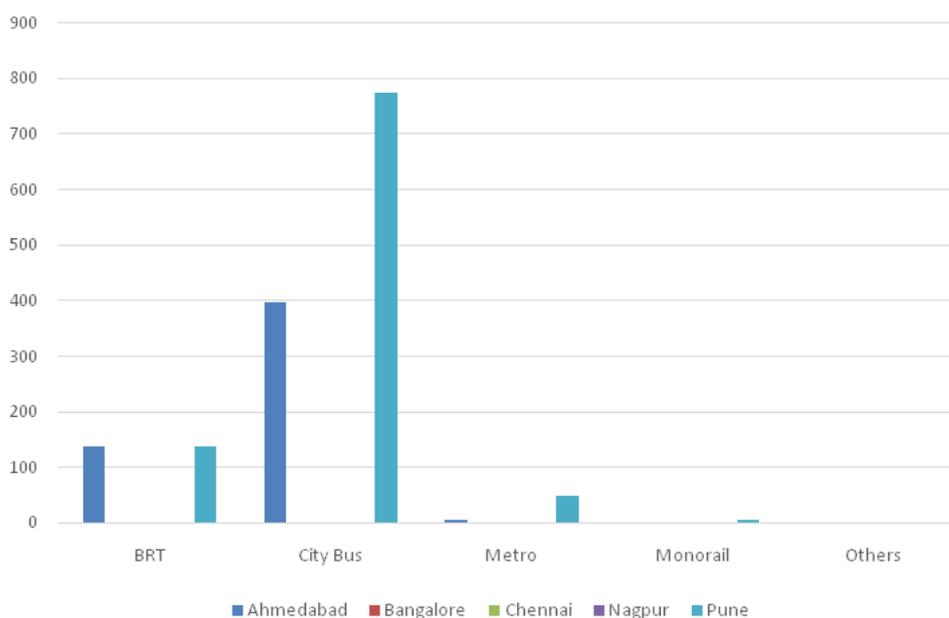


While the expenditure by Ahmedabad has had a slightly declining trend, that of Pune increased dramatically in 2014-15, more than doubling its expenditure on PT to around Rs. 1200. This increase can be attributed to a combination of added expenses in the year 2014-15 which is purchase of buses under JnNURM, expenditure on Metro, increased expenditure on BRTS in the year.

It is observed that no expenditure has been made for public transport in the cities of Bangalore, Chennai and Nagpur. This is because these cities have separate, independent agencies for public transport with independent budgets which are not a part of the municipal budget. This does however mean that the city itself, spends nothing on public transport, not even in terms of any grants or subsidies to the public transport agency.

Graph 17

Public Transport Category Expenditure in Detail



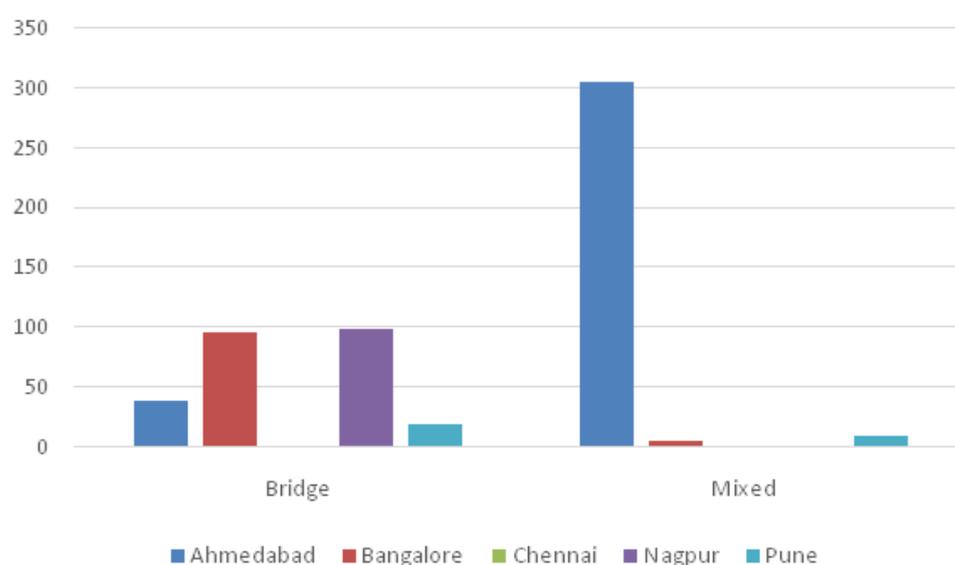
Both Ahmedabad and Pune spent the major part of their expenditure on the city bus service, amounting to 68%, while 28% was spend on the BRTS. Pune spent more than twice that of Ahmedabad in city bus services, while spending similar amounts on BRTS. Both cities also spent a marginal amount on the Metro, while Pune spent some on the Monorail as well.

Mixed Mode Expenditure

Mixed category expenditures are those that benefit more than one mode. Bridges over rivers for instance are a good example, as several modes benefit to different extents from their construction. Ahmedabad city had the largest amount spent on mixed modes, close to 4 times that of other cities. Its expenditure has been declining over the years, finishing almost Rs. 150 below 2012-13 levels at Rs. 250 per capita. Of the other cities, Pune spends the least on Mixed Modes, Chennai did not report any for this category.

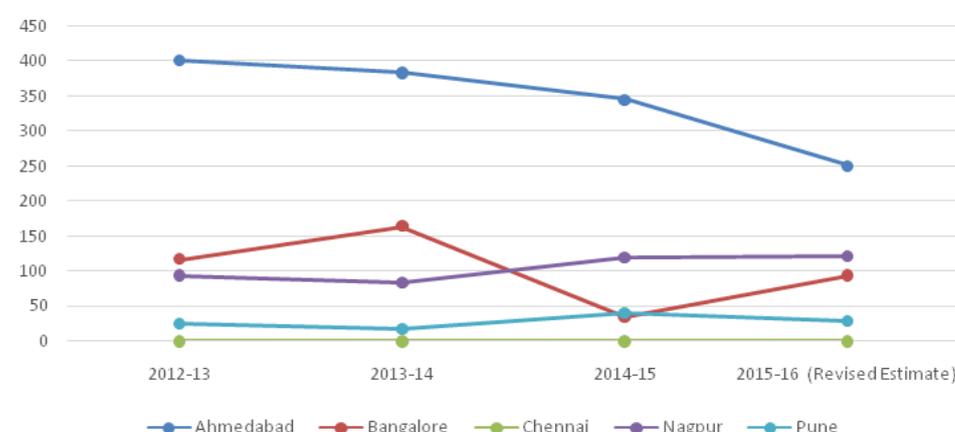
Graph 18

Mixed Category Expenditure In Detail



Graph 19

Trend of Mixed Category Expenditure



Of the expenses, Mixed modes has the highest expense of 56%, with Ahmedabad spending the most in the mixed sub-category, indicating expenditure that may be vague about its impacts on various modes. Most other city's expenditure was on Bridges amounting to 44% of expenses, with Nagpur and Bangalore spending the most, followed by Ahmedabad and Pune.

Conclusion

Transport is a large part of the expenditure of city budgets. The table below indicates that it is on average 25% of the municipal budget expenditure. This makes it even more important to know the nature of this expenditure.

Transport as a share of total budget	2012 - 13	2013-14	2014-15	2015-16 (Revised Estimate)
Ahmedabad	32%	29%	26%	24%
Bangalore	23%	20%	29%	31%
Chennai	19%	20%	29%	39%
Nagpur	18%	24%	36%	41%
Pune	19%	19%	20%	18%
Total	22%	22%	28%	31%

To ascertain environmental sustainability of the various expenditures, these expenditures were reclassified based on the carbon emission categories of these modes.

Graph 20

Sustainable Mobility Share of Budget

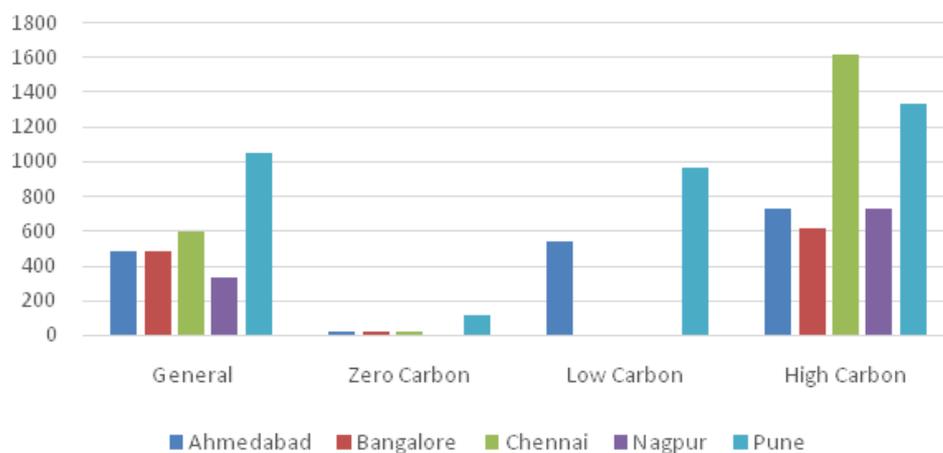
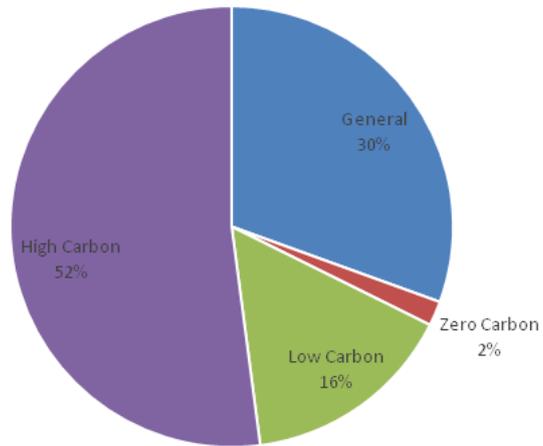


Chart 7

Sustainability mobility share of the transport budgets



It reveals that close to 30% of the expenditure is General in nature. However, the large part of the expenditure, 52% is towards high carbon modes of transport. Low carbon modes have only 1/3rd the expenditure of the high carbon modes. **Zero carbon modes on the other hand have the least expenditure amounting to only 2% of the entire transport expenditure.** This makes a clear case for the need to rethink the way municipal transport expenses are envisioned and supported.

Existing plans and the budget

All the cities included in this study have also been JnNURM cities, meaning that all of them have made comprehensive mobility plans which were a pre-requisite to receive funding under JnNURM. It makes an interesting case study to analyse whether these CMPs have been reflected in any way whatsoever in the three years of analysis taken up in this project. All the cities except Chennai have in place a Comprehensive Mobility Plan (CMP) / Comprehensive Traffic and Transportation Plan. Though a point to point analysis of the targets/ projects in the CMPs was not possible, important observations have been discussed in this chapter.

As mentioned before in the report, in the case of Pune, the Comprehensive Mobility Plan was passed after a delay of four years in 2012 by the General Body with the proviso that any projects could be added to this plan subject to the agreement of the body in future. This clause, added later, absolutely nullifies the objective of a 'plan'. The expected mischief of this clause is evident in a number of non-CMP projects being introduced in the Development Plan of Pune, majority of which are flyovers and road projects¹⁰.

The targets of the Comprehensive Mobility Plan (2011) of Nagpur by the year 2031 read as follows;

Bench Marks and Targets

Index	Description	Formulation	Existing	Target
Average Speed of Network	Average running speed (kmph)	Average running speed for all vehicles	27	35
Modal Share of PT Motorized	Modal Share	Public Transport Trips/Total Study Area Trips	10%	30%
Modal Share of NMT	Modal Share	NMT Trips/Total trips	25%	50%
Accessibility	Percentage of work trips with travel time <15min	(Work trips with Travel Time less than 15min/Total Trips)	8%	50%
Bus Supply (Nagpur City)	Buses per Lakh Population	(Bus Fleet in Nos.)/Population in Nos.) x100000	8	50
Walkability	Availability & Usability of Footpaths	(Footpath length in Km/Road length in Km)x100	70%	100%
Cyclability	Availability & Usability of Cycle Tracks	Cycle Track length in Km/Road length in Km)x100	0%	100%
Fatality (2012)	Fatal accidents	No. of fatalities/lakh population	9.59	0

It must be noted in the light of the above table, that Nagpur has no cycle tracks or cycle friendly roads as of today, the city bus system has been on and off intermittently over the years. MSRTC stopped running city bus service in 2006 citing losses. The bus system, named Starbus, was then outsourced to a private operator in 2007. Substandard performance, where Vansh Nimay India Ltd., the private operator hardly ran half of its 270-strong fleet in the city, spelled misery for the city's 2 lakh public transport users. The Star Bus public transport which was constantly caught in controversies was changed and in its place four companies were given charge to run the city bus service in Nagpur city. The Public Transport system now run under the title of 'Apli Bus Pariyojana' (Our Bus Service) will have 195 buses of which 55 buses will be Ethanol fuelled Green Bus. In the new system, only 237 of the old buses owned by NMC will be retained.

10 http://sumnet.in/index.php?option=com_content&view=article&id=23:transport-related-provisions-in-pune-s-draft-development-plan-a-critique&catid=18&Itemid=163

The remaining buses are not fit for operation. Also, it is significant and unfortunate to note that there is no mention of cycle rickshaws as a mode of transport in this plan document. The plan also proposes formation of a Unified Metropolitan Transport Authority for better coordination of transport works, which hasn't been initiated till date.

In Chennai, from the Second Master Plan 2026, it can be observed that there is progress in roughly one-third of the proposed actions/ projects. Notable projects such as mono rail, BRT, cycle lanes, cycle sharing, freight corridor, however, have not moved beyond the proposal stages.

As mentioned in the CTP of Bangalore, there is an allocation to cycle friendly roads in the years 2013-14 and 2014-15. Accordingly, Jayanagar area in Bangalore has cycle tracks, but they too are almost non-existent now¹¹. Apart from this not much has been done to fulfil the target of cyclability in the city until now.

11 <http://www.thehindu.com/news/cities/bangalore/the-vanishing-bicycle-tracks/article5793087.ece>

Budget and the Media

The main reason behind analysing this part was perceived importance of budget making as part of governance and citizenship. Main questions to be addressed here were whether and to what level are citizens capable of correlating budget and their city's development, what in the budget is emphasized more than other parts and whether any sort of accountability is generated because of reporting about the budget.

Transport related expenditure figured as the largest or second largest share of the total budget in these cities. Therefore, visible media coverage about 'roads' was found in most cities. Except for Nagpur, where very little was found on transport section but more on sources of revenue and debt in the whole budget. Media reports in Bangalore or Pune have been observed to be loyally advocating for new roads, flyovers, signal free corridors and so on, pressurising the city authorities on delays on these motor vehicle centric projects. The Bangalore Mirror compared the 2012-13 Municipal Budget to Bangalore's roads – full of potholes! The Mirror criticised the BBMP for presenting a budget without knowing how such a huge amount would be raised¹². Media reports also criticized how the budget just seemed a copy-paste job of previous years' budget¹³ with projects like signal-free corridors making an appearance yet again with no progress being made. What must be noted is that none of the media reports criticize signal-free corridors itself, they just mention that these projects are again being proposed without fund allocations for these being clear. Janaagraha, an NGO analysed that year's budget and showed how while roads got a whopping 41.5% of the budget, footpaths got less than 1% of the budget.

The reporting about budget in general has been vigilant in Chennai. For example, media reports for the fiscal year of 2013-14 showed Greater Chennai Corporation investing heavily in infrastructure projects which would improve the transportation experience for commuters, ranging from constructing flyovers for private vehicle owners to pedestrian-friendly footpaths, pedestrianised zone and skywalks in T. Nagar and Mylapore. By the start of the next fiscal year, a sum of INR 21,237 lakh had been spent on road projects, while the pedestrian-centric projects had not begun and only INR 9,857 lakh was spent on footpaths. These projects aside, the Chennai Corporation also conducted a detailed study of Multi Modal Transport Integration in 2013-14. This study was planned to provide increased integration between the various modes of transport and connectivity within the Chennai Metropolitan Area (Common Floor, 2013). Regrettably, the study, which began in 2014, is still unavailable in the public domain (The Hindu , 2013).

In Ahmedabad, at the start of the year in January 2016, the news media reported on the features of the recently released draft municipal budget. It included the vision of a "Clean, green and blue Ahmedabad" and the commissioner's idea for Car Free Days in the city, to bring down pollution levels. However, the car free days were never implemented after the initial phase of starting for a few Sundays. A proposal to develop 5,000 designated parking lots, to be manned by 200 women under self-help groups, was also reported (Express News Service 2016b). 52 Crores Rs were spent to build a newly inaugurated mutli-level parking in Navarangpura in Western Ahmedabad. About 30 crores were spent to build the one near Kankaria lake in Eastern Ahmedabad three years back. The Kankaria multi-level parking building is lying vacant and defunct. And the Navarangpura parking lot is not open for public yet. The news of parking lots were widely reported in the local English and Gujarati media as positive signs of development contrary to the sustainable mobility objectives. There were also reports on how the focus of the budget was on smart city projects. Laying of optic fibre networks across the city for intelligent traffic management, surveillance and a central command and control centre to integrate civic amenities. Reporting about flyovers, increase in the Standing Committee budget compared to the Municipal Commissioner's budget were also found.

12 http://bangaloremirror.indiatimes.com/bangalore/others/like-city-roads-bbmp-budget-too-riddled-with-holes/amp_articleshow/21472325.cms

13 <http://www.thehindu.com/news/cities/bangalore/bbmp-budget-glosses-over-citys-problems/article4957096.ece>

Learning and Suggestions

1. In spite of all the rhetoric about supporting the non-motorised transport in the National Urban Transport Policy and in the subsequent JNNURM plans, it was observed that there was negligible spending in the non-motorised sector. Large part of the expenditure, 52% is towards high carbon modes of transport. Low carbon modes have only 1/3rd the expenditure of the high carbon modes. Zero carbon modes on the other had have the least expenditure amounting to only 2% of the entire transport expenditure. This makes a clear case for the need to rethink the way municipal transport expenses are, prioritised, envisioned and supported. It is also important to note that bus-based transport in every city is struggling to keep with the demand and there are also issues of operational efficiency, transparency in their budgets (including accessing the basic budgets for any analysis).
2. As mentioned in the methodology, simply put, it feels as if the municipal budgets are analysis averse. The variable formats of different cities, the difficulty in finding sector related allocations, the variable level of details and granularity in different city budgets as well as in the same city budget makes for a reader unfriendly document.
3. No or little correlation is found between mobility plans made for the cities and their budget spending. At a larger level, in the absence of state urban transport policies, the principles of the National Urban Transport Policy are totally alienated from the planning process in cities. Until recently, municipal officials in transport related departments had no idea such a policy exists. Planning of transport related and possibly all types of expenditures is done in a monotonous cycle of accommodating spill overs from previous years and ad hoc, abrupt new projects without any cohesive vision for the whole city.
4. None of the cities have an outcome budget, leaving the job of performance audits to civil society organisations, activists and media. For any decision gone wrong, no accountability can be fixed, widening the scope of errors and ad hoc projects being taken up by cities.
5. There seems to be little synchronisation between the Ministry of Urban Development (MoUD) and the city level budgets. For the past couple of years, the MoUD has been actively announcing its support and encouragement to 'green mobility', 'low carbon mobility' and 'sustainable transport'. It has also come up with measurement criteria such as the Service Level Benchmarks¹⁴ for urban transport which grades cities on their services for transport. But there is a huge disconnect between these and what the cities' budget allocations. One way of connecting these is through centrally sponsored schemes such as JnNURM and the Smart Cities Mission. However, from the experience of JnNURM, these mechanisms haven't unfolded too well either. The way to bridge this gap is to formulate state specific urban transport policies, which can then be made statutory through acts, instead of relying solely on circulars and announcements made by the MoUD from time to time.
6. There also exists the peculiar case of compliance to these norms, existing simultaneously with rampant non-compliance of sustainable transportation principles in general in the cities. For example, in Pune, while the city complies with JnNURM by executing BRTS, in the same breath a couple of 'non-CMP' flyovers are found in the budgets. So, it is important to look at not just what is being complied to, but also at what the city does in general when it comes to transportation.
7. In relation to the previous two points, there is a dire need of some mechanism to be established which can quantify the money being allocated for various categories of transport projects and how it correlates to the principles of sustainable transportation being endorsed by the MoUD or other plans like CMP. For example, when Pune's CMP states its goal to have 75% trips by public transport and NMT, there must be some mechanism to know how the budget allocations are geared towards this goal.

14 <http://www.urbanmobilityindia.in/Upload/Conference/fb4dd1bc-9402-4a41-81d9-1ef76dc02adb.pdf>

Annexure

Details of categories of transport budget

Sub-category	
<i>Category</i>	<i>Subcategory</i>
<p>MV</p> <p>Any expense which is made for motor vehicles such as roads, flyovers, bridges, parking and so on.</p>	<ol style="list-style-type: none"> 1. Flyovers / Underpass 2. New Roads 3. Parking 4. Road repairs
<p>PT</p> <p>All public transport related expenses such as buying buses, building bus stops, depots, loans to bus transportation, any other modes of public transport such as Metro, monorail.</p>	<ol style="list-style-type: none"> 1. BRT 2. City Bus 3. Metro 4. Monorail 5. Others
<p>NMT</p> <p>All expenses towards non-motorised transportation such as footpaths, cycle tracks, foot over bridges, subways, skywalks etc.</p>	<ol style="list-style-type: none"> 1. Cycle track 2. Footpaths 3. Pedestrian-b (those expenditures which seem to be made for pedestrians such as skywalks, foot over bridges and under bridges but do not confirm to principles of sustainable transport)
<p>General</p> <p>All other expenses which are part of the road transport system but which cannot be specifically categorised as any of the above.</p>	<ol style="list-style-type: none"> 1. Administration 2. Electricity 3. Labour 4. Machinery 5. Salary 6. Storm water drainage 7. Street lights 8. Traffic signals
<p>Mixed</p> <p>Any entries which club two or three categories. For example: beautification of a street, development works on a road, footpath and road divider clubbed together etc</p>	<ol style="list-style-type: none"> 1. Mixed 2. Railway Bridge

