

# Review of Twelfth Plan Proposals for Urban Transport

RANJIT GADGIL

The Twelfth Five-Year Plan aims to foster more inclusive and sustainable growth. Urban transport finds mention in its chapters on sustainable development, environment, and urban development, which focus not only on aspects of public transport, but also urban planning and governance. Identifying the three main themes that emerge from the Plan's recommendations, this paper takes a critical look at them. It comments on what appears to be a significant divergence from the policy recommendations in the Plan and the Plan outlays, both in the first phase of the Jawaharlal Nehru National Urban Renewal Mission and what is proposed in the second phase, before going on to make specific recommendations on how matters could be improved.

Since the launch of the Jawaharlal Nehru National Urban Renewal Mission (JNNURM) in December 2005, there has been a greater focus on the issue of urban development by the Government of India, driven by significant funding and various policy documents, in particular the National Urban Transport Policy (NUTP) that was adopted in 2006. More than seven years after the JNNURM was launched, we are now in a position to assess the impact of the mission. The debate on urban transport has been widened with the introduction of many new schemes, especially bus rapid transit (BRT) systems and metro rail projects. An annual urban mobility conference, the identification of various best practices, the publication of service-level benchmarks (SLBs) for urban transport, model agreements, tool kits, capacity-building workshops, advisories, and much more have come thick and fast from the Ministry of Urban Development in the wake of the mission. The Twelfth Five-Year Plan (2012-17) came at the end of the first phase of the JNNURM and the imminent launch of its second phase, JNNURM-II. With provisional results from the Census 2011 also being available, we are better placed to assess trends in urbanisation. The Twelfth Plan is thus an important policy document that reveals how the central government intends to shape the future of urbanisation and with it, urban development, planning, and transport. Hence, this is a good time to reflect on the JNNURM-I as well as critically analyse the Twelfth Plan and the provisions in the JNNURM-II.

## Twelfth Five-Year Plan (2012-17)

The Twelfth Plan has the tagline “faster, more inclusive and sustainable growth”, expanding on the more succinct “inclusive growth” vision of the Eleventh Five-Year Plan. Environmental sustainability was only a sub-element in the Eleventh Plan, while sustainability (not just environmental) has been made an essential feature of the current plan. The Plan seeks to promote faster gross domestic product (GDP) growth, while reducing the intensity of emissions – primarily to reduce energy needs – and being concerned about environmental consequences. Inclusivity is broadly defined; it is intended that growth benefit all sections of society, primarily the poor; be regionally balanced; promote equality; and done in a manner that is fair, accountable, transparent, participative, and socially just. The Plan goes so far as to say,

The conventional ways of measuring GDP in terms of production do not take account of environmental damage caused by production of certain goods which should properly be reflected as a subtraction from

Ranjit Gadgil ([ranjit.gadgil.1@gmail.com](mailto:ranjit.gadgil.1@gmail.com)) is the director of Janwani, a non-governmental organisation in Pune dedicated to advocating sustainable development policies and improved governance.

GDP. Only if GDP is adjusted in this way for environmental costs that growth of adjusted GDP can be called a measure of the increase in total production in the economy.

To this end, the central government released a framework for Green National Accounts in March 2013 (MOSPI 2013). The Twelfth Plan sets “a vision of India moving forward in a way that would ensure a broad-based improvement in living standards of all sections of the people through a growth process which is faster than in the past, more inclusive and also more environmentally sustainable”. This is a significant position articulated by the Planning Commission, which in many ways is close to the definition of sustainable development held by proponents of holistic, as opposed to purely GDP-driven, growth models. Urban transport is dealt with largely in three sections of the Plan – “Sustainable Development” (Chapter 4), “Environment” (Chapter 7), and “Urban Development” (Chapter 18). While there is considerable overlap, justifiably so, each deals with different aspects of urban transport, and we can identify three broad themes.

### Theme 1: Energy Efficiency

The Twelfth Plan is particularly concerned with energy efficiency, stating that faster growth will need ever more energy, which is a limited resource that has an ecological cost. This is consistent with India’s pledge to reduce the energy intensity of its economy by 20-25% by 2020 (MOEF 2010). It therefore stresses the need to be able to manage the demand for more energy without sacrificing growth by finding and promoting energy-efficiency across all sectors, especially those that rely almost exclusively on fossil fuels. It recommends,

- Developing technologies for more energy-efficient vehicles.
- Reducing subsidies to fuel, especially diesel, which it calls “large and regressive”. In addition to having fiscal implications, it “has distorted the use of energy in transport” and “worsened the problem of hazardous air pollution”.
- Promoting public and non-motorised transport in cities and rail for intercity passenger travel, while discouraging the use of private vehicles in urban areas.

Energy efficiency is such a dominant theme of the Twelfth Plan that even while categorically stating that the eight missions under the National Action Plan on Climate Change (NAPCC) must be an integral part of it, reducing carbon emissions is seen only as a co-benefit. The main reasons to reduce the energy intensity of growth are to save energy, increase energy security, and reduce emissions. Even the higher cost of renewable energy sources is rationalised on the basis of the “cost of environmental damage”, which it claims is not properly measured and taken into account. This line of thought becomes a powerful reason for supporting non-motorised transport, the stark contrast being pointed out in paragraph 4.98.

(1) Only 4% of the total passenger transport activity is by private automobiles in cities, but they contribute about 20% of passenger transport emissions.

(2) Non-motorised transport supports 4% of passenger transport activity in the country without causing any emissions at all.

Quite consistent with its overarching theme, one of the low-carbon strategies, “better urban public and non-motorised transport”, is evaluated on the basis of growth, inclusion, the environment, and carbon mitigation thus,

- Growth – Mildly positive – reduced fuel imports and savings on fuel expenditure could get invested domestically.
- Inclusion – Positive – mobility for the poor would improve significantly.
- Local Environment – Positive – reduced local emissions.
- Carbon Mitigation – Positive – reduced consumption of fossil fuels.

While this is not an unreasonable assessment, the emphasis on energy savings leads to undervaluing the full benefits that would accrue from having better public and non-motorised transport. Specifically, the Plan fails to mention that the growth benefits of this strategy would be enhanced by

- reduced congestion in cities, which are becoming more severely gridlocked with each passing day, thus reducing loss of productivity;<sup>1</sup>
- substantial financial savings for cities if they spend more on public transport and less on road infrastructure, flyovers, and parking lots;<sup>2</sup>
- lowered losses due to improved health of citizens and less loss of life;<sup>3</sup> and
- economic benefits from an increase in business related to public transport, cycling, and related technologies.<sup>4</sup>

The inclusivity benefits would also be greater since it is not only the poor, but also women, the disabled, senior citizens, and children who would benefit from better public modes of transport. The massive infrastructure needed for urban road projects meant primarily for private vehicles has deleterious effects on the urban poor whose livelihoods and settlements are displaced. These projects also severely affect natural habitats, green cover, and open spaces, and are thus more harmful to the local environment. Their carbon footprint is also substantial. A reduced need for such infrastructure projects will have positive effects across aspects beyond those considered. Interestingly, the Twelfth Plan recommends a reorganisation of the NAPCC. It suggests that the sustainable habitats mission should address issues related to urban planning and development, while “improving public transport” is to be a “policy thrust area” to be taken up under the JNNURM-II, which would be able to make the required funds available. While this makes sense, it does not substantially change the current situation since the JNNURM was already focusing on the improvement of public and non-motorised transport in cities. This formulation does, however, squarely put the onus of accomplishing the goals set in the Twelfth Plan on this on the JNNURM.

### Theme 2: Governance, Urban Management and Planning

The McKinsey (2010) report on urbanisation in India brought in the new thinking on this subject, and it was picked up and taken forward by the report of the High-Powered Expert Committee (2011) for estimating the investment requirements for urban infrastructure services. The Twelfth Plan later cast it in the form of a national policy. In this new paradigm, urbanisation is seen as being inevitable (with various trends and projections cited to support this) and desirable,

since it promotes productivity (through claims of “economies of scale”) and inclusivity, with cities being portrayed as melting pots where caste, religion, and gender divisions break down. The fact that cities are, however, in crisis is acknowledged, both with regard to the lack of basic civic services and ecological degradation, which leads to a two-pronged solution – fix urban governance and invest more in much-needed urban infrastructure. There are several contradictions in these prescriptions, both in principle and in practice, and perhaps a bias, as we shall attempt to show in the context of urban transport.

### Fixing Urban Governance

The Twelfth Plan and the reports that preceded it are correct in linking the poor quality of public transport (as well as other services) to weak urban governance and inadequate personnel and institutional capacities. The main issues identified are a lack of planning, especially integrating land use and transport at the planning stage, the absence of integrated Plans at the metropolitan region level, and poor coordination between the various authorities. In keeping with the overall theme of the Plan, a vision is put forth, which states that cities must be people-centric, foster greater people participation, and offer high-quality civic services (for example, “safe and affordable public transport services”) to all sections of society, while protecting the environment through the efficient use of energy, water, and land. To achieve this, the Plan points out,

- Need thrust towards improvement in governance structure and a major improvement in delivery of services (including public transport) in cities.
- Need to step up investments and also fix weaknesses in urban governance and management.
- Capacity building should be a separate submission of JNNURM with 10% funds allocated for this.

The major governance overhaul that is proposed is more empowered city mayors, who are to be recast as city managers or city chief executive officers (CEOs) with greater executive powers, thus avoiding the political quagmire that tends to slow down bold decision-making, deemed necessary for the fast-track transformation of cities into “engines of growth”. At the metropolitan region level, constituting and strengthening district and metropolitan planning committees (DPCs/MPCs), as mandated in the 74th Constitutional Amendment Act, which will be responsible for a spatial development plan for the region, including a regional transport plan, are emphasised. The Plan reiterates the need for both a metropolitan development authority and a unified metropolitan transport authority (UMTA), presumably to operate under the aegis of the MPC (although this is not explicitly stated in the case of the UMTA), which will act as technical and regulatory bodies at the regional level. It expects each city/town to prepare a development plan that will, inter alia, provide for

- Strategic densification especially along mass transit corridors with mixed land use.
- City mobility plan with special emphasis of making cities safe for vulnerable groups including women and children, pedestrian and cyclists.

The specific recommendation for so-called “strategic densification” is part of a larger urban agenda, laid bare in the opening sections of the Twelfth Plan.

Since overall government resources are limited and must be applied to other priority sectors such as health and education, it is necessary that cities, especially the larger ones, and progressively even the smaller ones, are encouraged and enabled to draw resources from the market and the private sector.

For this, they must improve their governance and ability to implement projects. They will also have to manage their land resources more strategically, both to ensure better land use and to secure what will be a principal resource for their future financial needs. They must become able to recover adequate service charges, and equitably, from their inhabitants (paragraph 1.166).

How infrastructure in cities is to be financed thus becomes clear – land is to be leveraged and it is necessary for cities to be able to exploit this vast untapped resource. Transport-oriented development (TOD) is then a tool to unleash the economic potential of this land, paving the way for large infrastructure projects, which will supposedly make the cities “world class”. Two comments are essential here. The first is to recognise that while urban land is a potentially significant resource that should be used effectively by cities, the combination of rampant corruption in land deals, extremely weak urban governance systems, and poor planning capacity is more likely to rob urban India of its most precious asset rather than help mobilise finances for infrastructure. Given woefully inadequate public amenities, open and public spaces, and a critical shortage of public housing, the blanket exercise of strategic densification is a potential recipe for disaster.

The Plan itself admits that cities are already dense and any increase in the floor area ratio (FAR)/floor space index (FSI) ought to increase per capita space availability – essentially bigger tenement sizes. Hence the description “strategic densification” is misplaced, and borrowed from Western urban typologies, where it has been argued that densification of sparse suburbs is essential for supporting mass transit systems. Indian cities are already dense, short of space, and growing. Public transport systems are unable to meet even the existing demand, and there is no need for further densification to generate demand. What is needed is better quality and greater supply of public transport. Sale of land near metro and other transit corridors is thus purely for raising capital to fund projects rather than generate demand. Densification strategies have been critiqued in the west (Neuman 2005; Breheny 1995), yet the repercussions of a wholesale increase in FAR is poorly understood or studied in the Indian context and bar Delhi, which has taken up more detailed TOD strategies (UTTIPEC 2010), are more likely to be implemented poorly.<sup>5</sup>

More significantly, the approach to better city planning by the governments at both the state and central levels remains warped. The JNNURM has made the preparation of city development plans (CDPs) mandatory for access to funding. CDPs are prepared by consultants empanelled by the Ministry of Urban Development. The planning amounts to little more than preparation of a city investment plan, done in a hurried manner, with no statutory public consultation process. The plans are not

vetted by the ministry, and compliance with even its own policies, such as the NUTP, is not enforced. These JNNURM CDPs are also at odds with the statutory “master plans”, “land use plans”, or “development plans” to be prepared by urban local bodies under state planning acts. By introducing this ad hoc process, the JNNURM has vitiated the states’ planning processes, rather than strengthened them. State governments, in turn, have refused to let go of the powers they possess over the planning process – all urban development plans in a state as well as any subsequent changes to them are subject to approval and changes dictated by the state government. Neither the state nor central governments have taken the only logical step, which would be making cities wholly capable of and responsible for better planning by creating strong urban planning departments at the city level, guided by policies that would ensure transparency, and insist on meeting clear social and environmental targets.

As a way to “step up investments”, public-private partnerships (PPPs) are favoured. These are seen as more efficient, able to raise capital, and improve the quality of projects. This rosy view of PPPs needs to be tempered by the failures of the London Underground PPP (NAO 2009) effort and the more recent Delhi Airport Express Line Metro.<sup>6</sup> The causes for the failure of these PPP arrangements were varied but the reasons included the complexity of the agreements, the long time-frames and the uncertainties that arose from it, and the lack of transparent and robust mechanisms for renegotiation. The Twelfth Plan does require “participation of people, specification of service standards, outcomes and monitoring as necessary prerequisites”, but these alone will not be sufficient to ensure successful PPPs. The inclusion of PPP projects under the Right to Information Act (DOPT 2013) after initial reluctance by the Planning Commission is a small but essential step, but clearly much more needs to be done to make PPPs work.<sup>7</sup>

- For metro rail projects, the Plan offers a curious mix.
- For metro in high density corridors and which are “viable on their own”, with admissible VGF [viability gap funding] and real estate development on land ordinarily required for the project should be done by PPP.
- For metro requiring additional real estate development rights should be taken up by the government.
- O and M [operation and maintenance] of metro and BRT projects should be done by PPP, especially components such as depots, stations and terminals.

The Plan implicitly seems to acknowledge that metro projects funded primarily through real estate development can be prone to extreme uncertainty and also manipulation (Ramachandraiah 2009), with undue financial advantage accruing to the metro builder while most of the risk is underwritten by the state. Fare setting is already emerging as an issue in the absence of any regulatory mechanism for metros.<sup>8</sup> The Plan touts the Delhi Metro as a success, responsible for “transforming the public transport system in NCR region”, but offers no measure for determining this. The debate about the success of metro rail projects is still being played out, with strong endorsements by proponents (Ramachandran 2012) being countered by those who remain sceptical about whether it is a cost-effective solution for Indian cities (Ramachandraiah 2012).

Given the clamour for metro rail projects in other cities, often driven by considerations other than transport itself, the Plan offers four rules of thumb for determining if a city qualifies for a metro.

- Peak hour peak direction traffic of more than 20,000 for at least 5 km of continuous length by 2021.
- Total population of more than two million as per 2011 Census.
- Average trip length of more than 7-8 km for motorised trips.
- At least 1 million ridership per day on organised public transport.

It cautions that “these criteria are in the nature of guidelines and are not to be construed as entitlement for a metro rail project” and that “as huge public money is involved in construction of these projects, a thorough cost-benefit analysis across available modes of transport is to be ensured in case of every project”. However, given that neither do any formats for such cost-benefit analyses exist, nor are any processes defined for the scrutiny of these reports, and the whole decision-making process is largely opaque, decisions about whether, and which, metro rail projects will be “cleared” by the central government are likely to remain political ones (Sreenivas 2011). No robust frameworks for cost-benefit analyses, specifically for the Indian context, have been developed. A tool kit prepared by the Ministry of Urban Development for alternative analysis (WSA 2008), finds no mention anywhere in processes defined by the ministry for the evaluation of proposals for funding. The lack of mention of processes and evaluation tools is a major omission in the Plan.

### Theme 3: Sustainable Transport

The Twelfth Plan quite explicitly cites the NUTP as the basis for its own recommendations. Hence it calls for policies to encourage greater use of public and non-motorised transport in India’s cities and towns, while discouraging the use of private motor vehicles. The Plan sets a specific target of 50% of motorised trips to be catered for by public transport by the end of the Plan period (paragraph 18.98). While this is a positive suggestion, it is not very ambitious. As per a 2008 study by the Ministry of Urban Development (MOUD 2008), 44% of urban motorised trips (27% of all trips) were already being catered for by public transport. In megacities (with more than eight million population), the share of public transport was already 63% of motorised trips. Ironically, these are the very cities for which metro rail projects are proposed and hence will get the lion’s share of future public funding in transport. A careful look at the MOUD study reveals that million-plus cities (with populations greater than one million but less than 10 million) suffer from a severe lack of public transport systems, which inevitably results in an explosion in the number of private vehicles. Whether these cities will be able to plan and implement quality public transport projects remains a big question and neither the Twelfth Plan nor the JNNURM provide any satisfactory answers.

The Plan rightly perceives that public transport is burdened by a perverse tax regime and calls for reduced taxes. A specific and welcome suggestion is to refund fuel taxes. It recognises that urban transport is a state subject and that the central

government has limited levers, the JNNURM being one of them. It, however, makes certain broad recommendations.

- Promotion of urban rail systems;
- City mobility plans and integrating various modes of transport through initiatives such as common mobility cards;
- Taxes and congestion charging to disincentivise private vehicles;
- Social and gender auditing of urban transport projects;
- Urban transport departments at the state level;
- Promotion of non-motorised transport; and
- State-level safety commissions.

Though mandatory, mobility plans prepared by cities have been found to have deficiencies (Chotani 2010; TERI 2011) and these do not seem to have been vetted by the ministry. More disconcerting, the Plans remain on paper with the ministry neither insisting on their implementation nor having any mechanism to track compliance. With rapidly increasing fuel prices, the government has been unwilling to raise taxes on private vehicles. Congestion charging has been recommended by the ministry in an advisory (MOUD 2013), but given the technical complexity of these schemes and a lack of political will, this too remains on paper. The recommendations for promoting non-motorised transport are especially disappointing, stating, “While renovating arterial roads or new road projects, it should be ensured that the project provides for pedestrian path and bicycle lanes, wherever the space permits”. This reduces planning for non-motorised transport to merely an add-on to road projects and dilutes the absolute necessity of having adequate footpaths and cycle tracks. Finally, given the unacceptably high number of traffic accidents in cities, safety needs to be put in the spotlight through an insistence on better street design, starting with adherence to Indian Roads Congress (IRC) guidelines. Making safety the responsibility of the urban local authority, which implements infrastructure projects, is also likely to lead to safer streets than having a state-level commission.

**Inclusivity in Urban Transport**

As mentioned, the Twelfth Plan places considerable emphasis on “inclusivity”. One of the hallmarks of sustainable, or people-centric (as opposed to vehicle-centric) transport planning is that it is inherently non-discriminatory. While this aspect is not explicitly mentioned in the “Urban Transport” section, one finds other aspects of “inclusivity” elsewhere in the Plan. These include the following.

**Women and Child Rights:** The Plan recommends addressing women-specific transport needs, providing dedicated services such as ladies special buses, and toilets for women, and security through pre-project gender assessment and gender audits.

**Persons with Disabilities:** To reduce discrimination in transport, the Plan adopts the two-pronged strategy of incorporating service delivery, and generating public awareness about disability rights.

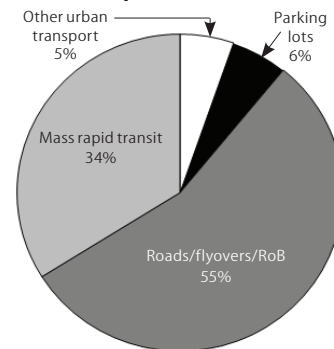
**Senior Citizens:** The Plan acknowledges that given the increase in the number of senior citizens, their issues must be

addressed. It mentions that this will be done by way of the National Policy on Senior Citizens, which is yet to be finalised. But the draft policy recommends,

Age friendly, barrier-free access will be created in buses and bus stations, railways and railway stations, airports and bus transportation within the airports, banks, hospitals, parks, places of worship, cinema halls, shopping malls and other public places that senior citizens and the disabled frequent (MOsJ 2011).

Much more stringent adherence to existing acts and guidelines, utterly lacking now, should have been recommended. The Persons with Disabilities Act, 1995 already makes it mandatory for public transport and public spaces to be barrier-free, and guidelines of both the central public works department (CPWD) and the IRC give detailed instructions on how to achieve this. Yet these are disregarded at every level. The Plan should have strongly urged the JNNURM-II to make accessibility audits an integral part of project compliance for funding. Similar gender audits should have also been made mandatory. In both cases, substantial awareness and capacity building among the authorities, more than the public, is required for these issues to become a part of how projects are designed and implemented.

**Figure 1: JNNURM Fund Allocation (Urban Transport)**



**JNNURM and Financial Layouts in the Twelfth Plan**

An assessment of urban transport funding under the JNNURM (JNNURM 2012) reveals some significant facts. The JNNURM consists of two schemes, the Urban Infrastructure and Governance (UIG) submission for million-plus urban agglomerations (UAs) and select capital and other cities, and the Urban Infrastructure Development Scheme for Small and Medium Towns (UIDSSMT) for all other cities and towns. Under the UIG, Rs 15,374 crore was allocated for urban transport projects (total approved cost) and an additional Rs 4,724 crore for the purchase of buses, and Rs 1,014 crore for roads under the UIDSSMT. As Figure 1 shows, despite the emphasis on public transport and non-motorised transport, more than 50% of the UIG funds (not considering the funds for buses) were allocated for roads, flyovers, and railway overbridges.

As per Census 2011, the total urban population of India stands at 377 million. A summary of the distribution among various population categories is given in Table 1.

**Table 1: Urban Population Distribution Summary, Census 2011**

Census 2011	Total Urban	100,000 +	1 million +
Population (million)	377	265	161
Number of UAs/cities/towns*	4,041	468	53

\* Only statutory towns considered. Source: Census 2011.

The allocation in the UIDSSMT for urban transport is less than 5% that of the UIG. Since the UIG is primarily focused on million-plus cities, with some other select capital and special cities, the overall funding is very imbalanced (Table 2, p 54).

Figure 2 shows that the allocations even within cities shows a very wide variation, not just in total funds allocated, but also per capita. Just the top four cities got a whopping 54% of all urban transport funding under the JNNURM, while accounting for only 26% of the urban population.

**Table 2: JNNURM Funding Distribution across Cities**

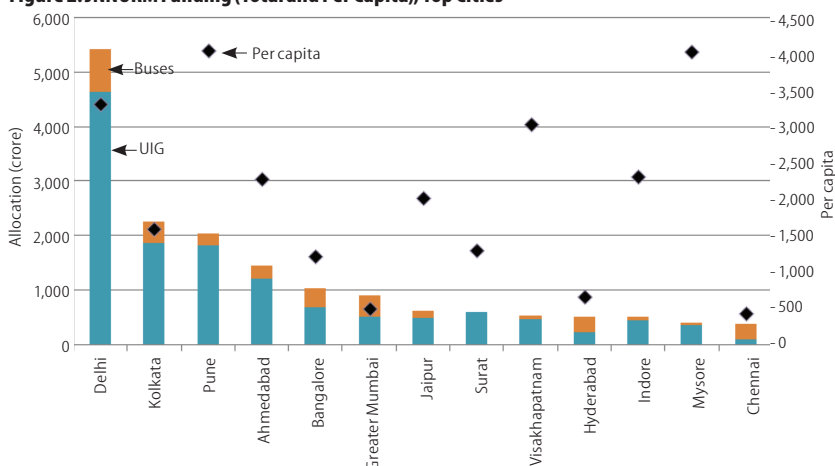
Cities/Population Funded Under JNNURM (Urban Transport)	< 1,00,000	Between 1,00,000 and 1 million	1 million +
Population (million)	Less than 7 of 112 (6%)	16 of 104 (15%)	145 of 161 (90%)
Number of UAs/cities/towns*	87 of 3,959 (2%)	41 of 415 (10%)	41 of 53 (77%)

\* Only statutory towns considered.

Source: Based on JNNURM funding data and Census 2011 data.

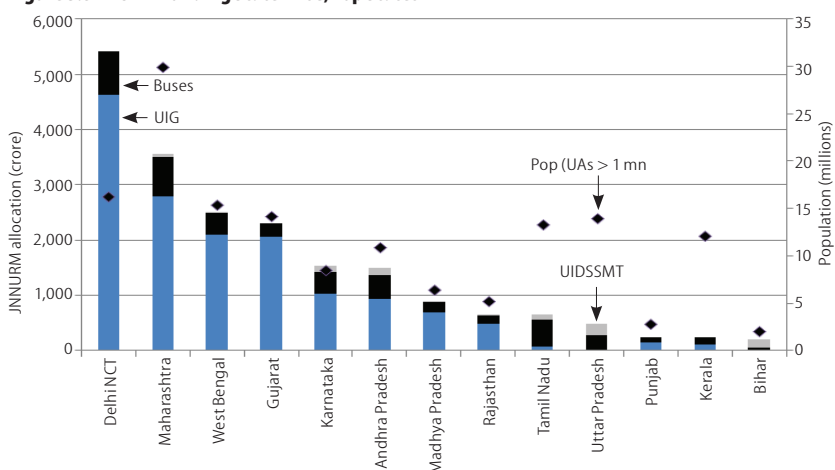
With funding under the UIG scheme much larger in magnitude than the UIDSSMT, states with urban populations concentrated in million-plus UAs typically got higher funding (Figure 3). However, states such as Uttar Pradesh, Tamil Nadu and Kerala did poorly even then.

**Figure 2: JNNURM Funding (Total and Per Capita); Top Cities**



Source: Based on JNNURM funding data and Census 2011 data.

**Figure 3: JNNURM Funding State-wise; Top States**



Source: Based on JNNURM funding data and Census 2011 data.

The main conclusions that one can draw from this analysis are (1) JNNURM funds have not been allocated according to the primary focus areas of the NUTP. (2) Allocation of funds has been very uneven with some cities and states benefiting far more than others.

(3) Funds have been allocated to larger cities (million plus) to a far greater extent than cities between 1,00,000 and a million.

In short, the funding has been more to fix big city problems that address the issue of urban transport across the country, with very little being done to prevent future problems that are likely to arise as the Tier I cities grow, and which will see the largest shift to personal vehicles.

Against this background, the Twelfth Plan suggests the following budgetary layout – 75% urban roads, 20% mass transit, with most of it earmarked for metro rail, and less than 2% on capacity building. In addition, it recommends that funding under the JNNURM-II should follow these guidelines.

- Require adherence to approved development plans as well as other reform and financial conditions.
- All urban transport projects which improve public transport are admissible.
- Urban roads constitute a large fraction of investment in urban sector and since JNNURM is fungible, urban road projects

should be admissible. Metro rail projects which meet the 4 rules of thumb mentioned earlier, but nonetheless subject to a thorough cost-benefit analysis.

By allowing urban road projects to be admissible under the JNNURM-II, the very heart of conditional funding under the scheme has been cut out. The JNNURM-I was restrictive in its funding, having reduced funding for projects meant only for new roads and flyovers, knowing full well that cities would be much more inclined to seek support for such projects at the expense of public transport and non-motorised transport.

**Recommendations**

The JNNURM has overly relied on funding projects as a way to influence urban transport. While recognising that the planning, design, implementation, and monitoring systems have to improve, there has been little progress on that front. The task at hand is considerable and increasing in magnitude. A more practical approach must be based on decentralising the process of improvement, starting with the state governments, and leveraging their ability to push reforms in cities. The creation of state urban transport policies, modelled on the NUTP, could be an important step in that direction. Additionally, the JNNURM-II can help catalyse change by insisting on better processes and, most critically, by allocating funds for capacity building. It must also ensure regional balance and comprehensively cover the whole of urban India.

Specifically, the JNNURM-II should do the following.

- (1) Allocate at least 10% funds to build capacity at the central, state, and city levels, in line with the recommendation in the Plan (section: 18.72).

- (2) Insist on full compliance with the 74th Constitutional Amendment Act, including the setting up of the DPCs/MPCs and other institutional frameworks at the regional level.
- (3) Remove the JNNURM's CDP process and encourage city master plans as per state town planning acts, building capacity at all levels for better-quality planning techniques.
- (4) Encourage cities to adopt street design guidelines that promote the equitable allocation of road space and enhance the safety of road users, in particular pedestrians and cyclists, and comply with all the IRC and disability guidelines.

- (5) Make mandatory comprehensive mobility plans and fund against outcomes, not just physical projects.
- (6) Funding for metros and other mass transit systems (BRT, monorail, and so on) should be considered only after the needs for these systems are established using alternative assessments and comprehensive cost-benefit analyses, including social and environmental impact assessments,
- (7) Earmark funds specifically for non-motorised transport projects, including capacity building at the city level for planning and execution.

## NOTES

- 1 From various sources such as the State of Australian Cities Report, 2010, which says, "The avoidable cost of congestion for the Australian capitals was approximately \$9.4 billion in 2005 (but) projections show that by 2020, this cost will rise to \$20.4 bn, impacting adversely on Australian productivity"; and a Centre for Economics and Business Research survey that says, "Traffic congestion costs UK economy £4.3bn a year".
- 2 An alternative analysis of the budget of the Pune Municipal Corporation by Parisar showed that shifting budgetary allocations from motor vehicle-centric projects to public and non-motorised transport projects could lead to a saving of 30% of the transport budget, transport itself accounting for 30% of the total budget that year.
- 3 Studies show that health benefits from active travel can be significantly higher than just less polluting modes of travel; "Public Health Benefits of Strategies to Reduce Greenhouse-Gas Emissions: Urban Land Transport", *The Lancet*, Vol 374, No 9705, pp 1930-43, 5 December 2009. Studies also show that national health programmes can save large amounts of money when walking and cycling are promoted. A recent one estimated more than \$1 billion annual savings for the UK's National Health Service; "Effect of Increasing Active Travel in Urban England and Wales on Costs to the National Health Service", *The Lancet*, Vol 379, No 9832, pp 2198-205, 9 June 2012.
- 4 Studies in countries such as the UK suggest the benefits of an increase in cycling contribute almost \$5 billion a year to the economy; "The British Cycling Economy", London School of Economics, 2011, available at [http://corporate.sky.com/documents/pdf/press\\_releases/2011/the\\_british\\_cycling\\_economy](http://corporate.sky.com/documents/pdf/press_releases/2011/the_british_cycling_economy)
- 5 Cities such as Pune have now made blanket proposals for increasing the FAR along proposed metro corridors from 1-1.5 to 4 without any detailed studies or micro-level planning, showing the dangers of such sweeping recommendations.
- 6 The loss to the public from such failed PPPs can be potentially significant. The NAO reported in connection with the failed London Underground Metro PPP, "We estimate that the overall direct loss to the taxpayer arising from Metronet's administration (bankruptcy) is between £170 million and £410 million, in 2007 prices". For the Delhi PPP, see "Reliance Dumps Airport Express; DMRC to Steer It", *DNA*, 29 June 2013, <http://www.dnaindia.com/india/1854801/report-reliance-dumps-airport-express-dmrc-to-steer-it>.
- 7 "Plan Panel Says No to RTI in PPP Projects", *The Indian Express*, 4 March 2011, <http://www.indianexpress.com/news/plan-panel-says-no-to-rti-in-ppp-projects/757629/>
- 8 See "Mumbai Metro Yet to Roll, But RInfra Is Already Seeking a Fare Hike", *DNA*, 7 June 2013, <http://www.dnaindia.com/mumbai/1844841/>

report-mumbai-metro-yet-to-roll-but-rinfra-is-already-seeking-a-fare-hike.

## REFERENCES

- Brehehy, M (1995): "The Compact City and Transport Energy Consumption", *Transactions of the Institute of British Geographers*, New Series, Vol 20, No 1, pp 81-101.
- Census of India (2011): (i) Urban agglomerations/cities having population 1 lakh and above, available at [http://www.censusindia.gov.in/2011-prov-results/paper2vol2/data\\_files/India2/Table\\_3\\_PR\\_UA\\_Cities\\_1Lakh\\_and\\_Above.pdf](http://www.censusindia.gov.in/2011-prov-results/paper2vol2/data_files/India2/Table_3_PR_UA_Cities_1Lakh_and_Above.pdf)  
(ii) Rural-urban distribution, available at [http://censusindia.gov.in/2011-prov-results/paper2/data\\_files/india/paper2\\_at\\_a\\_glance.pdf](http://censusindia.gov.in/2011-prov-results/paper2/data_files/india/paper2_at_a_glance.pdf)  
(iii) Rural-urban distribution of population, India/State/Union Territory, available at [http://censusindia.gov.in/2011-prov-results/paper2/data\\_files/india/Statement1\\_RU\\_State.xls](http://censusindia.gov.in/2011-prov-results/paper2/data_files/india/Statement1_RU_State.xls)
- Chotani, M L (2010): "A Critique on Comprehensive Mobility Plan for the City", Association of Municipalities and Development Authorities (AMDA), presented at the Urban Mobility Conference 2010.
- CPWD (1998): "Guidelines and Space Standards for Barrier Free Built Environment for Disabled and Elderly Persons", Central Public Works Department, Ministry of Urban Development, New Delhi.
- DoPT (2013): Office Memorandum, 15 April, Department of Personnel and Training, Ministry of Personnel, Public Grievances and Pensions, New Delhi.
- High Powered Expert Committee (2011): "Report on Indian Urban Infrastructure and Services", High Powered Expert Committee for Estimating the Investment Requirements for Urban Infrastructure Services, available at <http://www.niua.org/projects/hpec/finalreport-hpec.pdf>
- IRC (2012): "Guidelines for Pedestrian Facilities", Indian Roads Congress, New Delhi.
- Jenks, M, E Burton and K Williams (2004): *The Compact City: A Sustainable Urban Form?* E and FN Spon, London.
- JNNURM (2012): (i) Project Implementation Status (UIG) as on 10 May 2012, available at <http://jnnurm.nic.in/wp-content/uploads/2012/05/Projects-Implementation-Status-29-may.pdf>  
(ii) Status of release of ACA under bus funding project under JNNURM as on 31 December 2012, available at <http://jnnurm.nic.in/wp-content/uploads/2013/01/Updated-RELEASES-under-BUS-FUNDING-excel-table.pdf>  
(iii) State/town/sector-wise release status of projects under UIDSSMT as on 31 August 2010, available at [http://urbanindia.nic.in/programme/uid/uidssmt\\_pdf/status\\_approval.xls](http://urbanindia.nic.in/programme/uid/uidssmt_pdf/status_approval.xls)
- McKinsey (2010): "India's Urban Awakening: Building Inclusive Cities, Sustaining Economic Growth", McKinsey and Company, Mumbai.
- MoEF (2010): "Communication to UNFCCC", Ministry of Environment and Forests, New Delhi, available at [http://unfccc.int/files/meetings/cop\\_15/copenhagen\\_accord/application/pdf/indiacphaccord\\_app2.pdf](http://unfccc.int/files/meetings/cop_15/copenhagen_accord/application/pdf/indiacphaccord_app2.pdf)
- MoSJ (2011): "Draft National Policy on Senior Citizens", Ministry of Social Justice and Empowerment, New Delhi, available at <http://socialjustice.nic.in/npsc.php>
- MoSPI (2013): "Green National Accounts in India: A Framework", Ministry of Statistics and Program Implementation, New Delhi, available at [http://mospi.nic.in/mospi\\_new/upload/Green\\_National\\_Accounts\\_in\\_India\\_1may13.pdf](http://mospi.nic.in/mospi_new/upload/Green_National_Accounts_in_India_1may13.pdf)
- MoUD (2008): "Study on Traffic and Transportation Policies and Strategies in Urban Areas in India: Final Report", Ministry of Urban Development, New Delhi.  
(2013): "Introduction of Congestion Charging in Central Business Areas/Congested Areas in Indian Cities", Ministry of Urban Development, 15 Jan, available at [http://www.urbanindia.nic.in/programme/ut/Advisory\\_Congestion\\_Charging\\_CBA\\_CA.pdf](http://www.urbanindia.nic.in/programme/ut/Advisory_Congestion_Charging_CBA_CA.pdf)
- NAO (2009): "The Failure of Metronet", National Audit Office, Report by the Comptroller and Auditor General, London, June.
- Neuman, M (2005): "The Compact City Fallacy", *Journal of Planning Education and Research*, Vol 25, No 1, pp 11-26.
- NUTP (2006): "National Urban Transport Policy", Ministry of Urban Development, New Delhi.
- Ramachandriah, C (2009): "Maytas, Hyderabad Metro and the Politics of Real Estate", *Economic & Political Weekly*, Vol 44, No 3, pp 36-40.  
(2012): "A Superficial Picture", *Economic & Political Weekly*, Vol 47, No 19.
- Ramachandran, M (2012): *Metro Rail Projects in India: A Study in Project Planning* (New Delhi: Oxford University Press).
- Sreenivas, A (2011): "Urban Transport Planning: Lessons from the Proposed Pune Metro Rail", *Economic & Political Weekly*, Vol 46, No 6.
- TERI (2011): "Review of Comprehensive Mobility Plans", The Energy and Resources Institute, New Delhi, available at [http://ecocabs.org/media/resources/1319107711\\_5610\\_Report\\_10June.pdf](http://ecocabs.org/media/resources/1319107711_5610_Report_10June.pdf)
- Twelfth Five-Year Plan (2012): "Twelfth Five-Year Plan 2012-2017", 3 vols, Planning Commission, Government of India, available at <http://planningcommission.nic.in/plans/planrel/12thplan/welcome.html>
- UTTIPPEC (2010): "Transit Oriented Development (TOD): Policy and Implementation Framework", Unified Traffic and Transportation Infrastructure (Planning and Engineering) Centre, Delhi Development Authority, New Delhi.
- WSA (2008): "Alternative Analysis Toolkit", Wilbur Smith Associates, in association with CRISIL for the Ministry of Urban Development, accessed on 22 May 2012 at [http://www.iutindia.org/tools/AA\\_Toolkit\\_Document\\_FinalNov\\_2008.pdf](http://www.iutindia.org/tools/AA_Toolkit_Document_FinalNov_2008.pdf)