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Urban Transportation Projects

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ABSTRACT

In this age of globalization and urbanization, the subject of Urban Transportation has gained critical importance. The growth of population is a major factor in increasing urbanization. In India the high ratio of population below 25 years of age will further push the urbanization process. Preamble Transportation planning is an integral part of overall urban planning and needs systematic approach. Travel demand estimation is an important part of comprehensive transportation planning process. However, planning does not end by predicting travel demand. The ultimate aim of urban transport planning is to generate alternatives for improving transportation system to meet future demand and selecting the best alternative after proper evaluation.

Keywords:— Urban Transportation Planning, Urbanization, Department of Economic Affairs (DEA), Ministry of Urban Development (MoUD), National Urban Transport Policy (NUTP)

I. INTRODUCTION

This paper discusses about Nation Urban Transport policy for the request from the Government of India for the World Bank to provide support to the development of the urban transport agenda in India and to provide lending support. During the discussions between the World Bank and the Government of India represented by the Ministry of Finance, the Department of Economic Affairs (DEA) agreed on a three year program of support reflected in the World Bank's Country Strategy for India. Support is currently reflected in the Operations Program as an Urban Transport project under consideration and as a policy note as part of the non-lending services. In conjunction with these operations support to urban roads are included in developing cities under the proposed government development project by municipal corporations.

Urban Transport Problem in India

Efficient and reliable urban transport systems are crucial for India to sustain a high growth rate and alleviate poverty.

Indeed, the significance of urban transport in India stems from the role that it plays in the reduction of poverty, both through its indirect effects as a stimulator of poverty reducing growth and through its direct effects on the quality of life of people. Services and manufacturing industries particularly concentrate around major urban areas, and require efficient and reliable urban transport systems to move workers and connect production facilities to the logistics chain. In China for instance, service industries as well as manufacturing and labor-intensive industries have developed in economic centers endowed with good transport systems that could efficiently handle mobility needs of millions of workers and facilitate the movement of goods. India's economy is currently more service-oriented than China, with only about one million people employed in the IT industry - the mainstay of the tertiary sector. But growth in the services sector and development of Indian manufacturing industries will put more pressure on already saturated urban transport systems.

Many Indian cities have attracted significant investments in high-technology industries thanks to a competitive and highly qualified workforce. In the past few years however, urban infrastructure, and transport systems in particular, have been struggling to keep up with the growing number of firms moving into these cities. Local and international media have been continuously reporting the cities' difficulty in coping with growing demand for efficient transport systems. Developing an efficient urban transport system should be part of the broad Government policy aimed at improving the attractiveness and competitiveness of Indian cities.

Need of Urban Transportation System:

The impacts of transport on the quality of urban life go even further than that. In the 1990s, as India experienced a period of economic and urban growth, air pollution in its major cities became a cause of national concern and generated worldwide attention. The levels of airborne suspended particulate matter recorded in largest metro -cities far exceeded the ambient air quality standards adopted by India and many other countries. As manufacturing and power sectors are progressively cleaned up the relative importance of the urban transport sector to air pollution increases. For the Indian cities to retain their attractiveness to international capital, and to compete with other international centers, they must be livable.

The environment is important to the economic health of the cities as well as the medical health. In parallel with the growth related impacts of urban transport on poverty are the direct impacts of urban transport on the life of the poor. The worst off in urban transport may be the pedestrians, whose mobility and safety are hindered by non-existent, broken-down, and/or obstructed sidewalks; difficult street crossings; and flooding in monsoon seasons. The bicycle riders, once a major urban transport mode in India, are gradually being pushed off busy roads by motor vehicles. These two groups account for half of all traffic fatalities. Secondary and tertiary road networks appear to have received little attention or funding, especially in low-income areas.

Government of India Policy Response to the Urban Transport Problem:

The Government of India is addressing these issues. The *Ministry of Urban Development* has recently issued a draft *National Urban Transport Policy* for consultation which can be found on their

web site. They recognize the increasing urban road congestion and its associated air pollution. Their strategy puts primary emphasis on the need to increase the efficiency of use of road space by favoring public transport and by the use of traffic management instruments to improve traffic performance and by restraining the growth of private vehicular traffic. Complementing this is a strategy to reduce vehicle emissions by technological improvements in vehicles and fuels. Key instruments identified for support of this strategy are highlighted in blow.

A selection of key points from the draft National Urban Transport Policy

Public V/s Personal Transport – Modal Split

Encourage and support investments in facilities which would wean people away from the use of personal vehicles rather than build facilities which would encourage greater use of personal motor vehicles. This would imply the need for investments in improving public transport.

In–Street Traffic and Parking

Adoption of mechanisms to restrain the use of private motors vehicles through the market mechanisms such as higher fuel taxes, higher parking fees, reduced availability of parking spaces

Address safety concerns of pedestrians and cyclists by providing segregated right of ways though construction of cycle tracks and sidewalks

Develop a public bicycle program

Develop creative facilities like shade giving landscaping

Public Transport Services

Provide differentially priced services, with cheaper fares for those who cannot afford higher prices and premiums and premium services for those who would shift from personal vehicles if they get quality services.

Services to be provided by the private sector by removing barriers to entry.

Greater involvement of the private sector in public bus transport, where competition is possible, under close regulation and with well structured contracts

Where bus-based systems can serve the expected demand to opt for this first before considering rail based systems.

Vehicular Technologies

Develop a strategy to introduce 4- stroke motorcycles.

Develop a pricing strategy to prevent the use of diesel vehicles for personal use – this could be by way of a much higher registration fee.

Consider imposing a "vintage" tax for vehicles over 15 years old which are typically more polluting than newer vehicles.

Metro Systems

The Ministry to whom the subject of rail-based urban transport is allocated should come out with a paper clearly laying down a national policy. Provision to cities of more than 5 million through the public sector is proposed.

Coordination

The current structure of governance for the urban transport sector note really equipped to deal with the problems of urban

transport. Unified Metropolitan Transport Authorities are recommended.

The Government of India's proposed strategy is in many respects along the lines of international thinking on the approach to the urban transport problem. For example, the World Bank completed an Urban Transport Strategy review, after consultation with major stakeholders in client countries, including governments, transport operators, and nongovernmental organizations, as well as with representatives of other international institutions. That review linked urban development and transport sector strategies with a strong poverty focus. It noted that sprawling cities are making the journey to work excessively long and costly and that throughout the per capita motor vehicle ownership continues to grow with adverse impacts on traffic congestion and air pollution. Public transport is being stifled by this congestion and its relative performance tends to decline in comparison with the private modes. So the vicious circle of congestion and the decline of public transport are perpetuated. The safety and security of urban travelers are also emerging problems worldwide.

The key policy recommendations of the *Cities on the Move* review are not dissimilar to those of the Government of India policy paper. The review emphasizes better maintenance of road facilities and improved traffic management, and gives pride of place to the importance of public transport in addressing the burgeoning demand for movement in urban areas. Improved public transport and allocation of road space has been shown to also lead to an improved level of service for those in private vehicles (examples of Santiago and London). This requires improvement in the efficiency of operations (to be achieved through progressive involvement of the private sector in supply under strictly regulated contracts with the public authorities), priority use of existing infrastructure (including fully segregated bus rapid transit systems as well as more modest bus priorities), and efficient use of funds in the investment in new infrastructure. In this latter context it is noted that metro-rail systems while potentially having a role to play address only a small proportion of transport demands, at a very high cost premium, and in any case do not remove the requirement for a city to provide efficient on-street public transport. Cities such as New York, London, Paris, Rio, Sao Paulo and others which have high capacity metro systems also have high capacity bus services with priority on facilities. The need to tap the efficiency of the private sector has been demonstrated. The social dimension of urban transport was addressed both through a concern with the affordability of public transport and through a concern for non-motorized transport and walking.

That summary of the declared positions of the Government of India and the World Bank discloses a degree of agreement in principle, which should be the basis for a very fruitful collaboration in assisting the development of urban transport in India.

II. CONCLUSION

The goal of urban transportation planning is to develop a plan for an efficient, balanced transportation system for an urban area - one which will promote a desirable pattern of human activities. While the process has been standardized to some extent, each study must nevertheless acquire and manage a massive amount of information about the specific region with which it is concerned. This information, together with computer representations of transportation networks and travel patterns, is used to produce estimates of future travel

demand and utilization of facilities. Thus computers play an important role in providing transportation planners with the capability for evaluating a variety of proposed transportation systems in order to recommend allocation of government resources and to guide transportation policy.

REFERENCES:

[1] Alain Bertaud and Jan Brueckner, "Analyzing Building-Height Restrictions: Predicted Impacts, Welfare Costs, and a Case Study of Bangalore, India", (forthcoming), April 2003.

[2] Amitabh Kundu, "Institutional innovations for urban infrastructural development: an Indian scenario", in David Westendorff and Deborah Eade, ed's, Development and Cities, Oxfam, Oxford (UK), 2002.

[3] Bharat Singal, "Urban mobility for all – institutional issues", in X. Godard and I. Fatonzoun, ed., Urban Mobility for All, Proceedings of CODATU X Conference, Lomé (Togo), 12-15 November 2002, A.A. Balkema Publishers, Lisse, 2002.

[4] C. Ramachandran, "Case Study of Partnerships in Infrastructure Financing: A Study of India's Megacity Scheme" in Jeffrey Stubbs and Giles Clarke, ed., Megacity Management in the Asian and Pacific Region, Proceedings of the Regional Seminar, Asian Development Bank and United Nationa World Bank Urban Managemnt Program, Manilla, 24-30 October 1995.

[5] Dattatri, "Madras: A Rural Metropolis", in R.P. Misra, Million Cities of India, Vikas Publishing House Pvt. Ltd, New Delhi 1978.

[6] Dinesh Mehta and Pushpa Pathak, "Country Report of India," in Royston A.C. Brockman and Allen Williams, ed., Urban Infrastructure Finance, Proceedings of a Seminar held in Manilla, 16-18 April 1996, Asian Development Bank, Manilla (Philippines), 1996.

[7] Dinesh Mehta and Pushpa Pathak, "Financing of Urban Services in India: A Case for Appropriate Pricing and Cost Recovery," Habitat International 22 (4): 487-502, 1998.

[8] Evangeline Cuenco, Lending for Urban Development in India 1974-1995: Lessons from Bank Experience, processed, Country Operations, Industry and Finance Division,, South Asia Country Department II, The World Bank, Washington, D.C., September 16, 1996.

[9] Gakenheimer, R. and Zegras, C. "Travel Demand Drivers: Chennai, India." Geneva, Switzerland: World Business Council for Sustainable Development, June 2003.

[10] Geetam Tiwari, "Low cost means of transport in cities: the critical elements in city transport system in low income countries", in X. Godard and I. Fatonzoun, ed., Urban Mobility for All, Procedings of CODATU X Conference, Lomé (Togo), 12-15 November 2002, A.A. Balkema Publishers, Lisse, 2002.

[11] G. Thimmaiah, "Federal India – Burning Issues in Union-State Relations", Journal of Indian School of Political Economy (India); Vol. 9, No. 4:609-625, October-December

1997.

[12] K.M. Anantharamaiah and Vijay Raman, "A probabilistic revenue estimation model for providing a mass rapid transit system", in X. Godard and I. Fatonzoun, ed., Urban Mobility for All, Procedings of CODATU X Conference, Lomé (Togo), 12-15 November 2002, A.A. Balkema Publishers, Lisse, 2002.

[13] Mathew Joseph, "Performance of the Southern States – A Comparative Study", Economic and Political Weekly, September 13, 2003.

[14] Pradeep Singh Kharola, "Reforms in the public transport – a systems approach", in X. Godard and I. Fatonzoun, ed., Urban Mobility for All, Procedings of CODATU X Conference, Lomé (Togo), 12-15 November 2002, A.A. Balkema Publishers, Lisse, 2002.

[15] Paul Barter et al., "Lessons from Asia on Sustainable Urban Transport", in Nicholas Low and Brendan Gleeson, ed., Making Urban Transport Sustainable, Palgrave,Macmillan, Houndmills (UK) and New York, 2003.

[16] R. Jha and S.K. Singh, Small is efficient: a frontier approach to cost inefficiency in Indian state road transport undertakings", International Journal of Transport Economics, Vol. XXVIII, No. 1, February 2001.

[17] Ralph Gakenheimer, "Planning Transportation and Land Use for Cities in India", paper presented at the 1st Workshop on Transportation, Land Use and the Environment at ASCI The Administrative Staff College of India, Hyderabad, December 2-4, 2002.

[18] S. George, R. Jha and H.K. Nagarajan, "The Evolution and structure of the two-wheeler industry in India", International Journal of Transport Economics, Vol. XXIX, No. 1, February 2002.

[19] Somik Lall, Jun Koo and Sanjay Chakravorty, Diversity Matters – The Economic Geography of Industry Location in India, Policy Research Working Paper #3072, Development Research Group, The World Bank, Washington, D.C., June 2003.

[20] Sudarsanam Padam, "Transport and Urban Governance in India", in X. Godard and I. Fatonzoun, ed., Urban Mobility for All, Procedings of CODATU X Conference, Lomé (Togo), 12-15 November 2002, A.A. Balkema Publishers, Lisse, 2002.

[21] S. Ponnuswamy and M. Imtiyaz Ahmed, "Public Transportation Systems – a Case Study of Chennai", Urban Transport Journal (India), Vol. 2, No. 2, December 2001, pp. 76-95.

[22] S. Sriraman, "State road transport undertakings in India: critical issues, constraints and emerging options," Journal of Indian School of Political Economy (India); Vol. 13, No. 3:385-399, July-September 2001.

[23] T. Anantha Rajan, Travel Behavior of Slum Dwellers in Madras, Indian Institute of Technology, Madras, 1980.

[24] The World Bank, India – Reducing Poverty, Accelerating Development, Oxford University Press, New Delhi, 2000.

[25] Uwe Deichmann et al, Information-Based Instruments for Improved Urban Management, Policy Research Working Paper #3002, Development Research Group, The World Bank, Washington, D.C., March 2003.

[26] V.G. Rengaraju and R. Sivarandan, "Socieconomic Characteristics, Land Use and Travel Patterns of Chennai (Madras)", in Murthy V.A. Bondada, ed., Urban public transportation systems: implementing efficient urban transit systems and enhancing transit usage. Proceedings of the First International Conference, March 21-25, 1999, Miami, Florida, American Society of Civil Engineers, Reston, VA. 2000

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