



URBAN TRANSPORT IN INDIA

Present and Future

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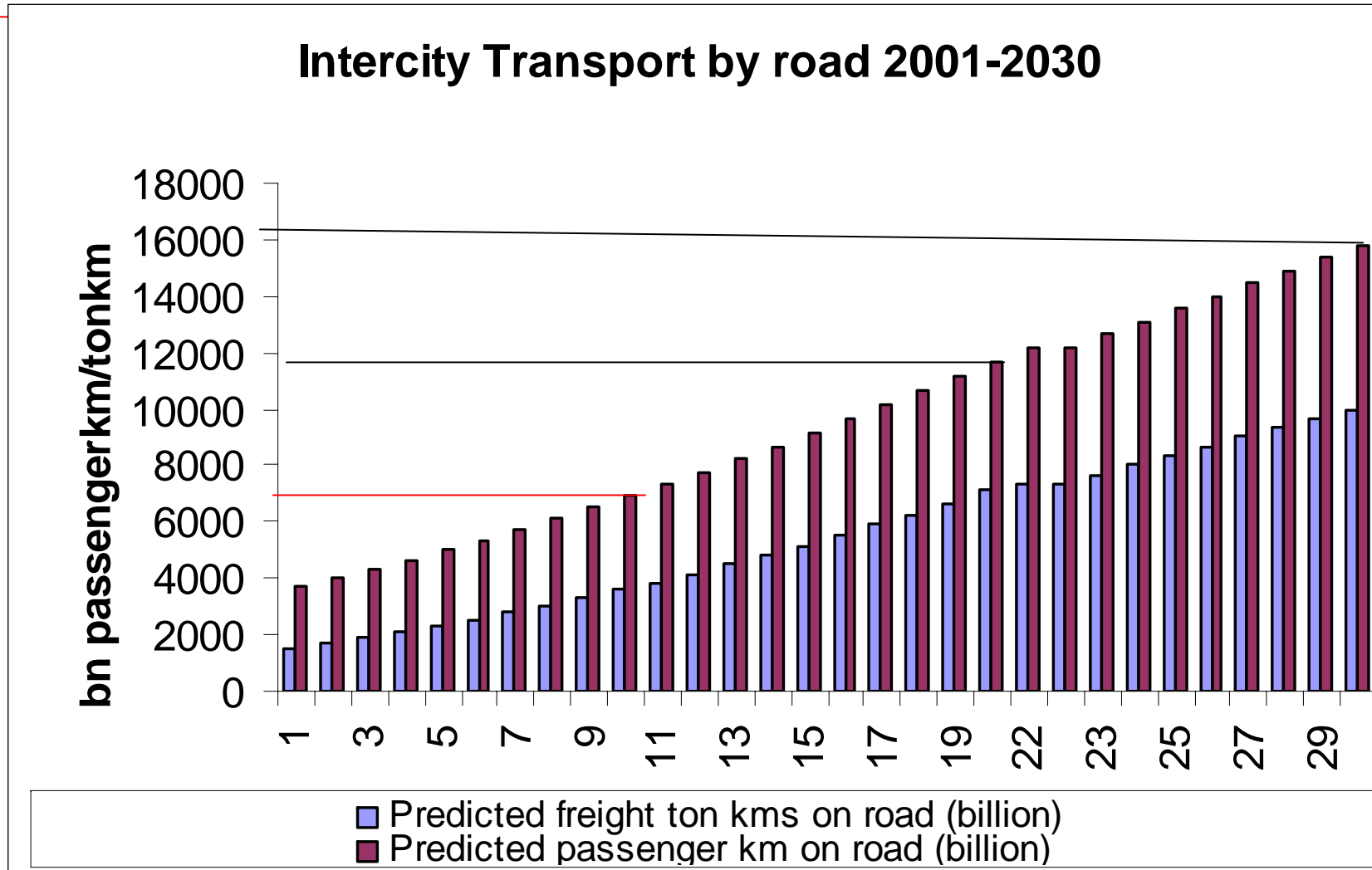
Future Challenges of Transport and Environment, June 24-25^{th,08} Berlin

The logo for TRIPP (Transportation Research and Infrastructure Planning Program) is located on the left side of the slide. It consists of a vertical blue bar with the word "TRIPP" written vertically in white, bold, sans-serif capital letters. Above the bar is a stylized graphic of a road or bridge structure with a white circle above it.

The Present

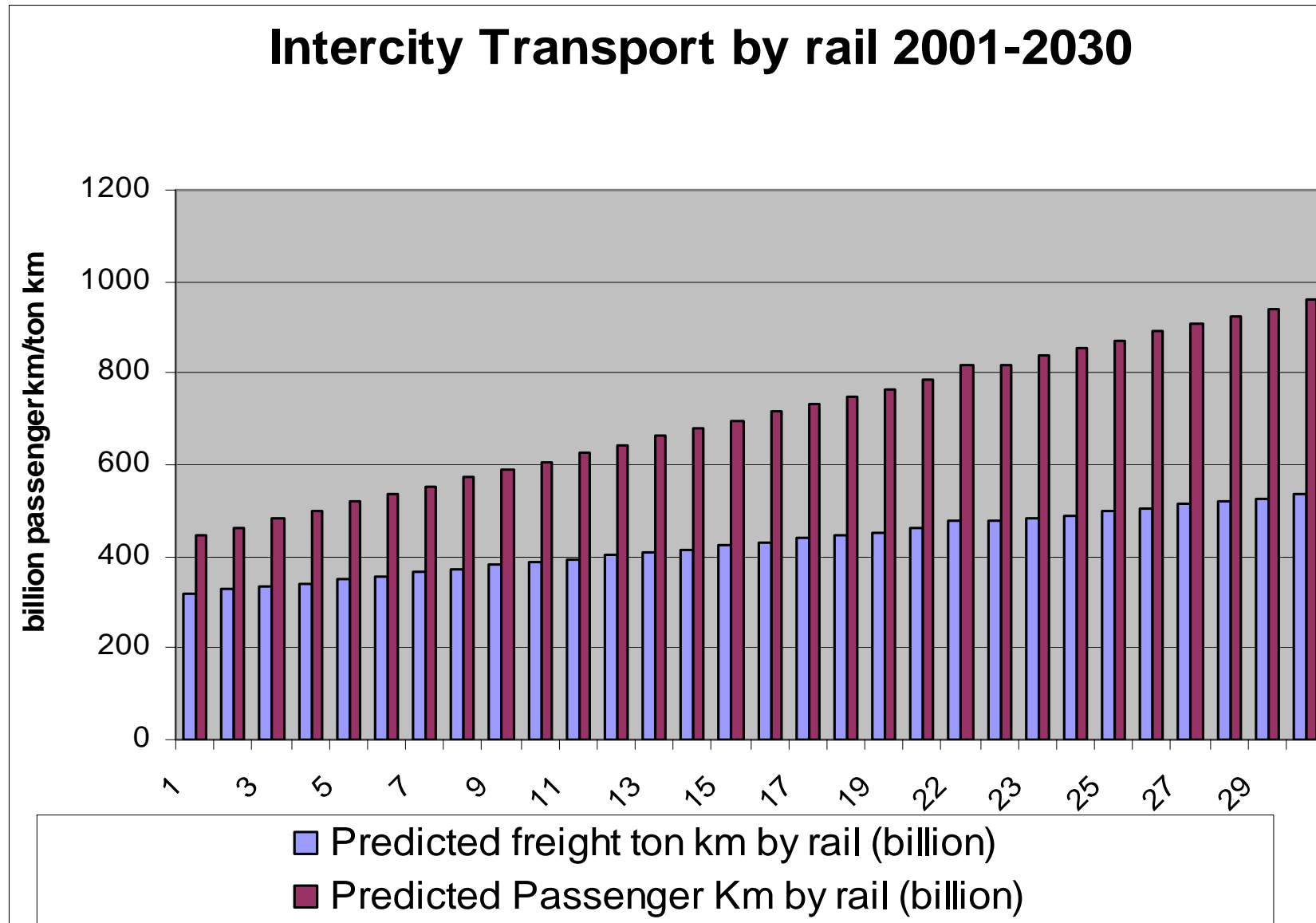
- Population 1.13 bn(2006),
~ (1.5-1.7) bn(2040)
- GDP growing @ 9%/yr
- Urbanization 30%(2006), ~ 40% (2040)

*Intercity transport f(supply of road and **GDP**)*



Passenger and freight estimated to increase by 4-5 times of 2001

Rail transport f(*supply of rail, GDP*)



Increase in passenger traffic 2-3 times, freight 1.5-2 wrt 2001

Urban Transport



Patna

Rickshaw policies?



Jaipur

Three wheelers paratransit?



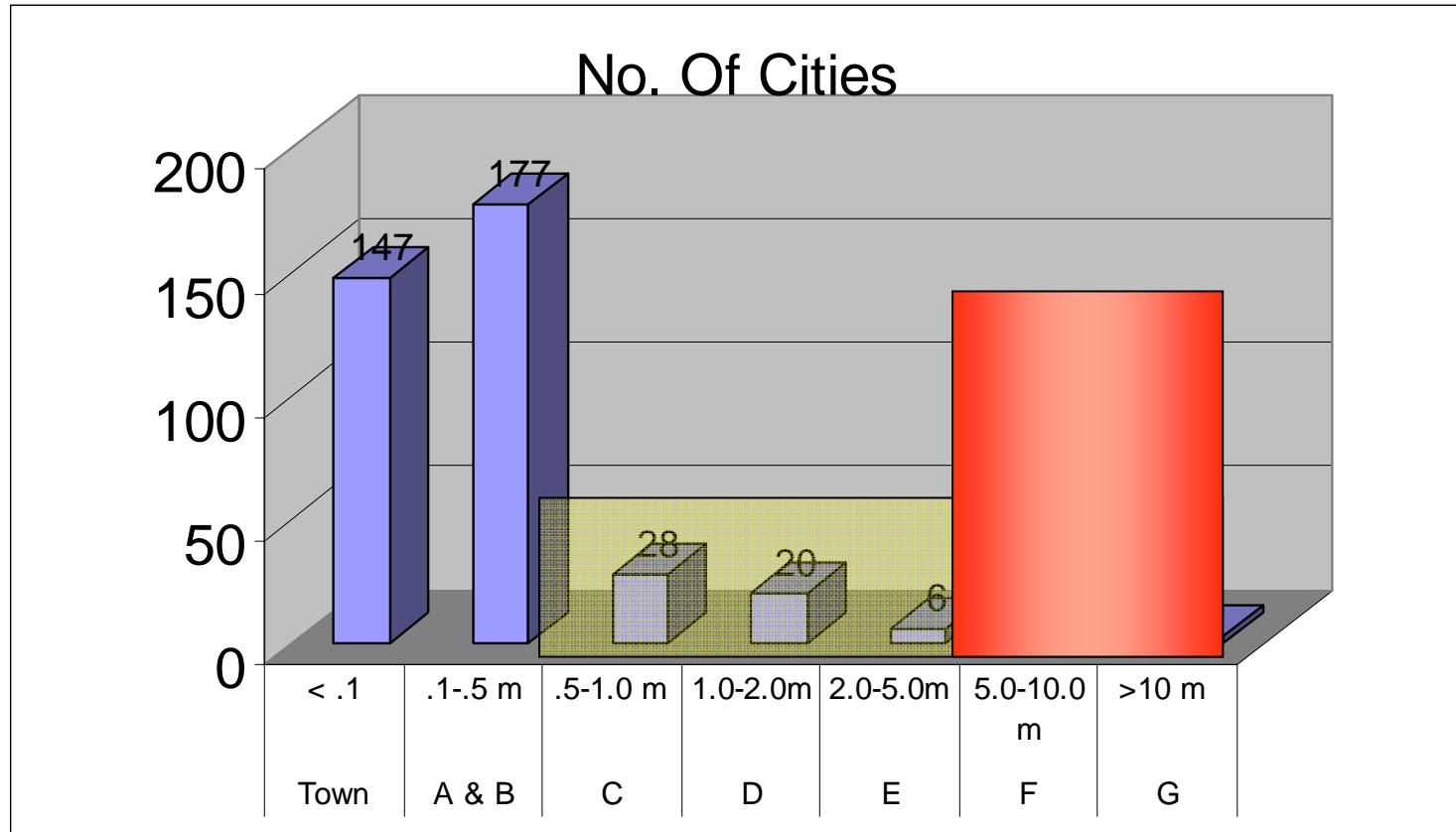
Hyderabad Two wheelers/three wheelers?



Lucknow Rickshaws,cycles peds?

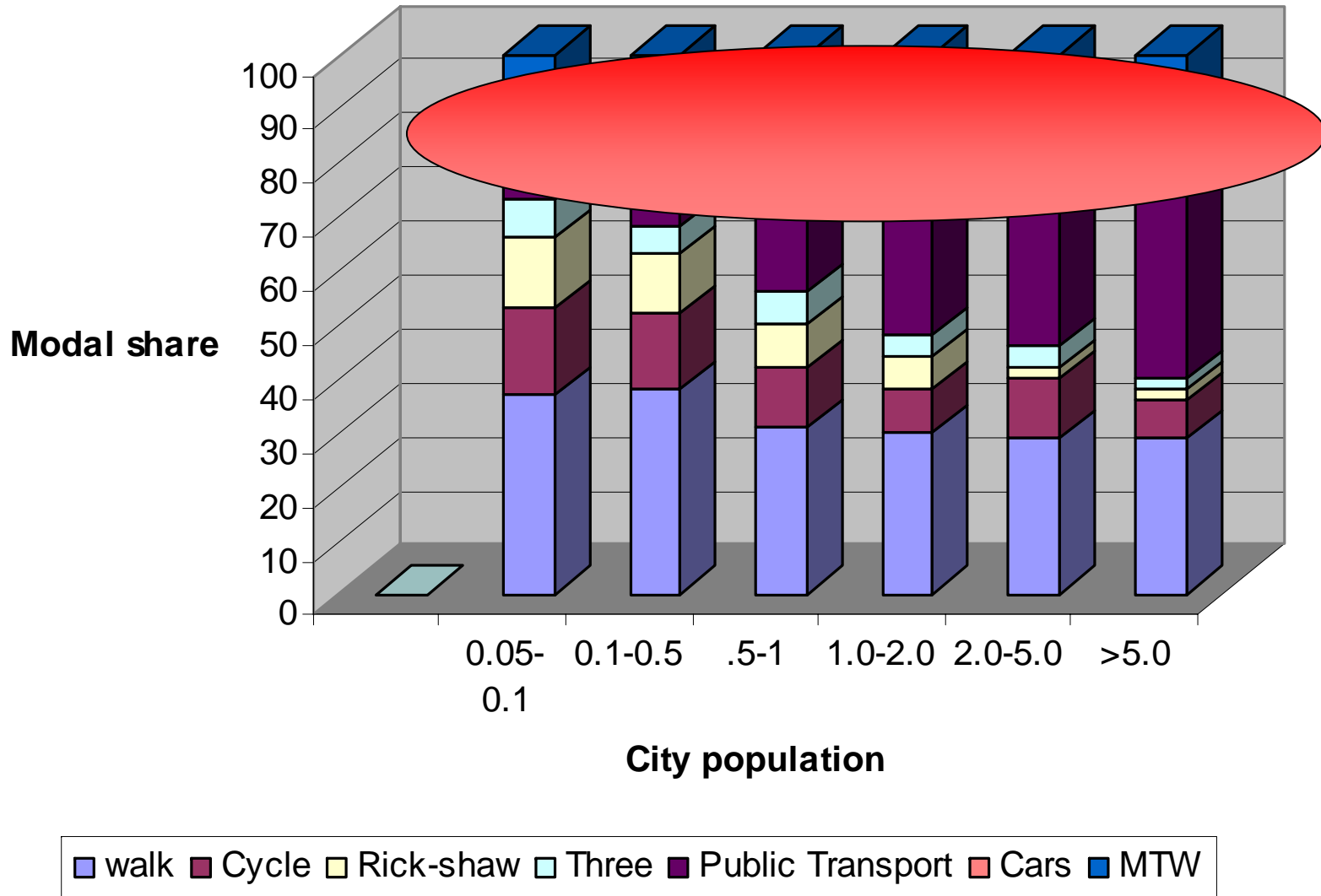
Urban India

~100 m in megacities, ~200M OTHERS



Urban Mobility

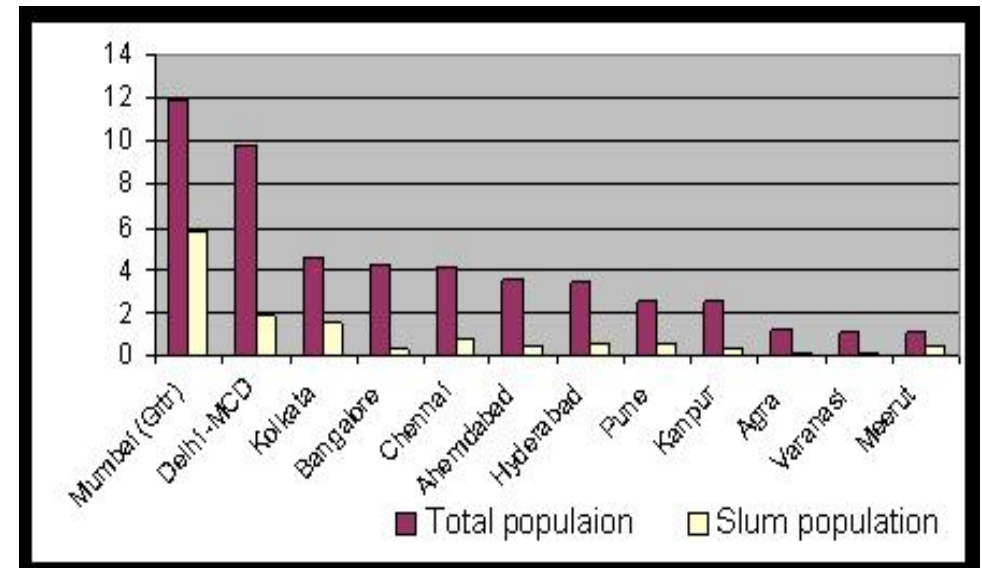
PT and NMV based, MTW majority personal vehicles



- Relatively slow, yet one of the largest urban systems
- 30-50% slum dwellers, 'unauthorized' self constructed dwellings, close to work
- Growth of informal sector often faster than formal sector



Urbanization in India

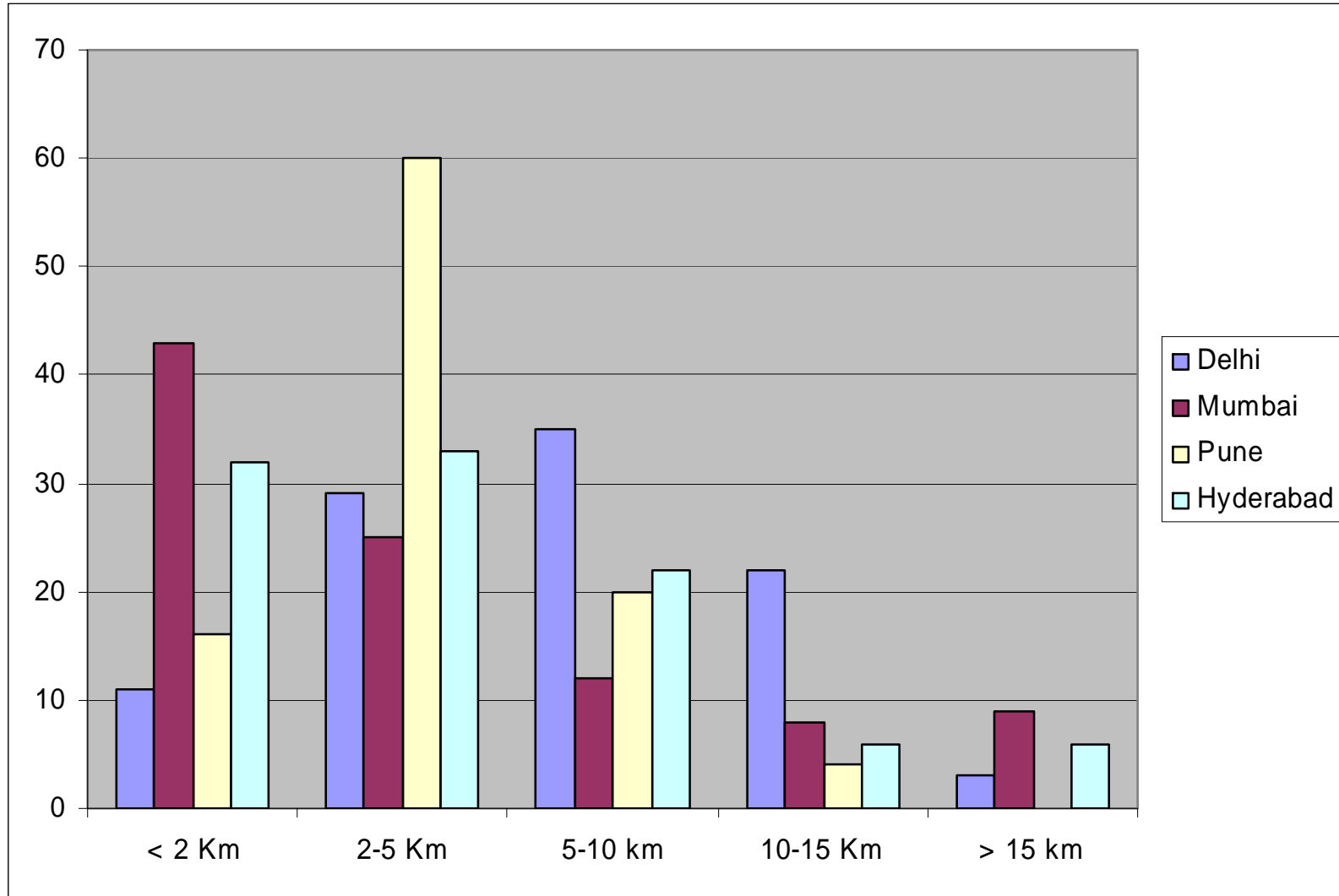


Bicycle ownership 30-50 %

Car ownership 3-13%

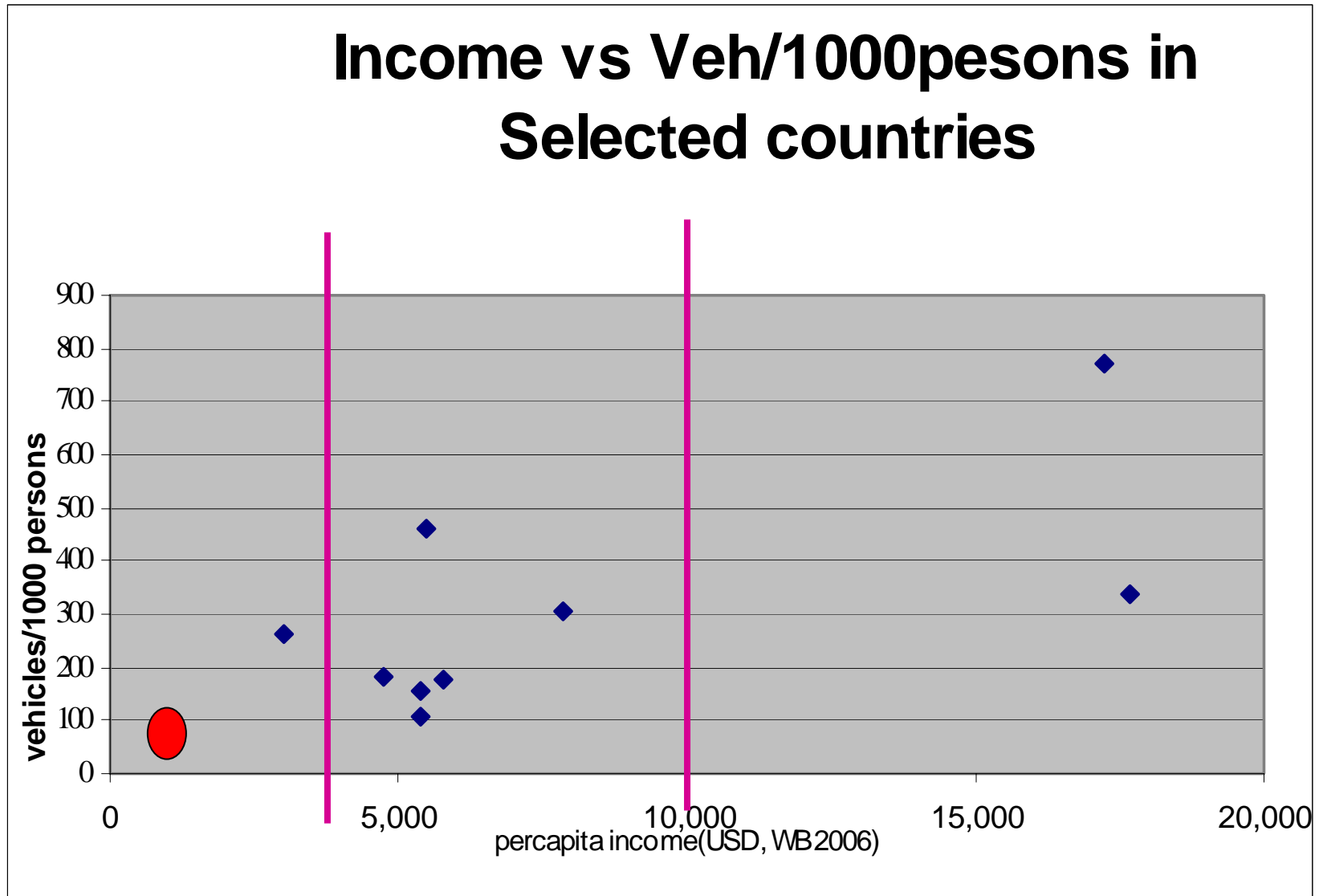
Scooter/Mcycle 40-50%

TRIP LENGTH DISTRIBUTION IN SELECTED CITIES

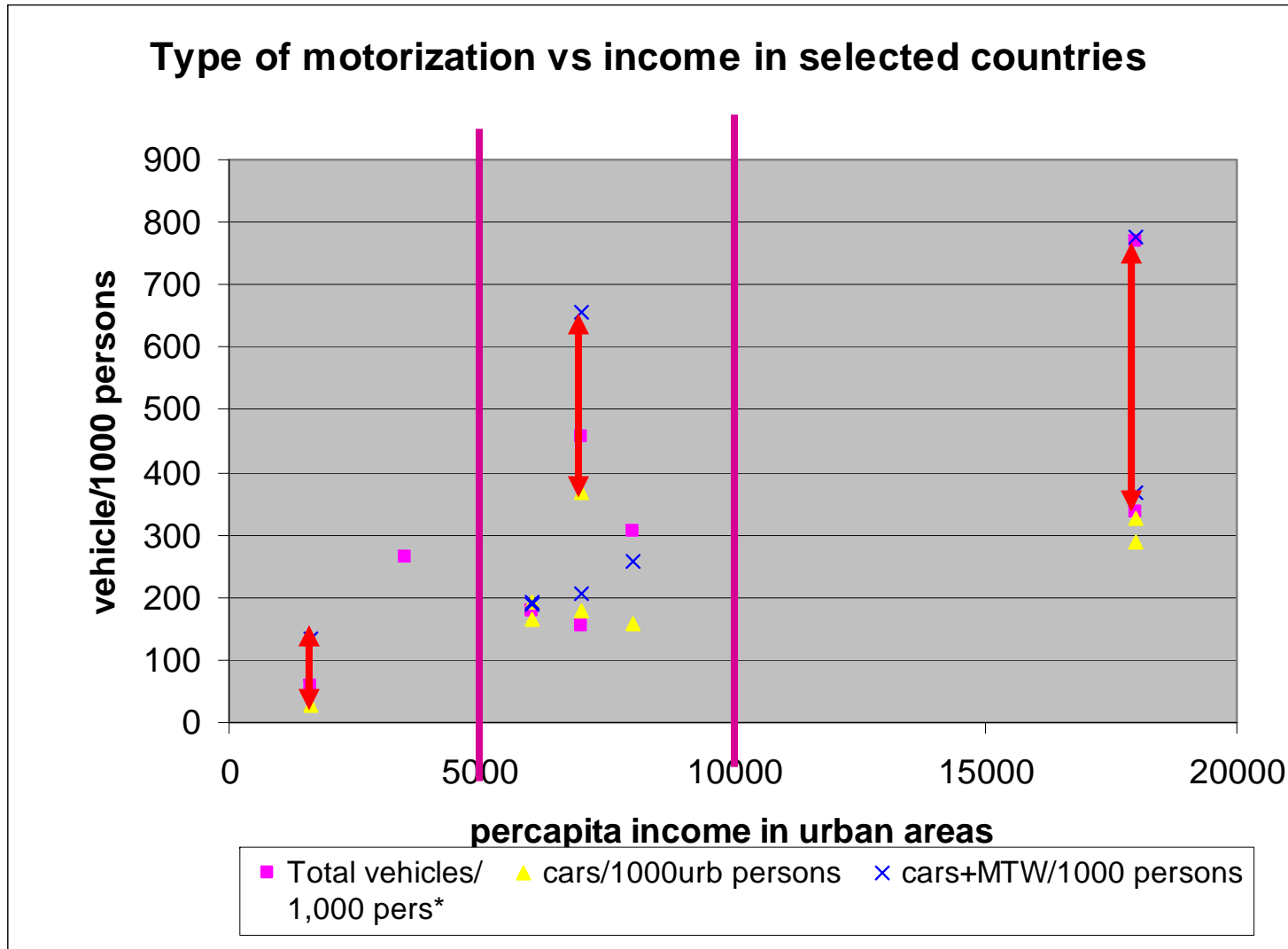


➤ *85% trips are less than 10 km long*

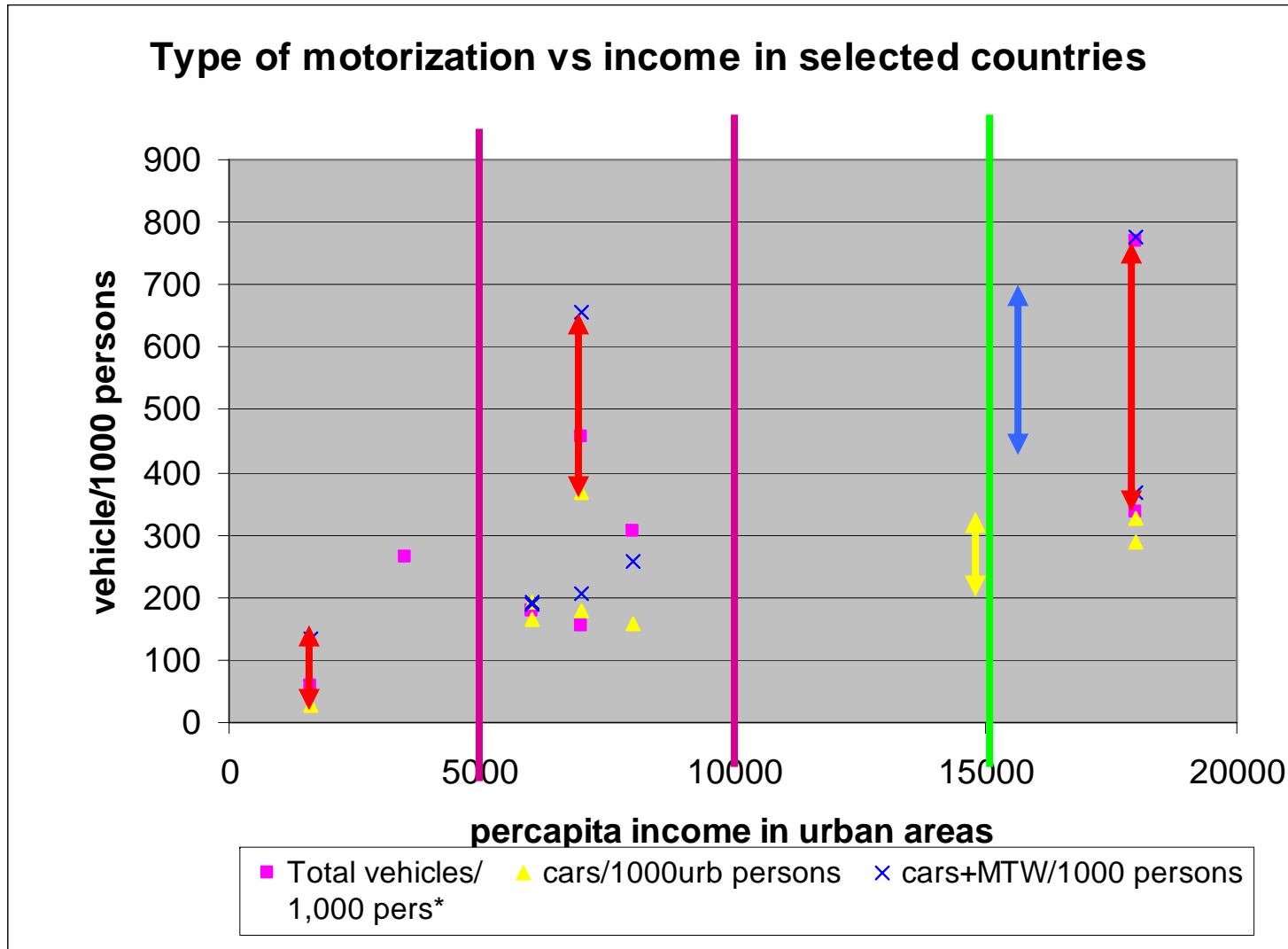
Motorization in selected countries



Motorization in selected countries



Motorization in selected countries



Urban Transport India:2040

- ~40% urbanization; 600-680 m people
- ~USD 15000 per capita urban income
- Car ownership: 100-150/1000 persons
 - Small cars
 - Public transport
- Vehicle ownership: 300-500/1000 persons
 - MTW
 - Small cars
 - Buses
- *~90m cars ; 270m vehicles*

Way Forward

Public Transport only way of decongesting cities

- We have to invest in public transport, in roads with space for bicycles, and pedestrians,Our cities have to become more liveable and more people friendly . *Manmohan Singh, Prime Minister 31 Dec 2005*

Priority to Public Transport

**All million + cities
and state capitals
to plan for mass transit**

Government of India :

Provides funds for feasibility studies

Provides financial support for capital investment through equity participation and / or viability gap funding to the extent of 20% of the project cost

Subject to:

Satisfaction on technology chosen

Recourse to innovative methods of additional resource mobilization

Financial sustainability of operations

Arrangements for coordinated management

BRT/NMV Status in Indian Cities (JNURM Funding approved)

- Delhi
- **Pune** 13 km (pilot), 65 km phase I, (Rs.600 cr)
- Ahmedabad
- Indore
- Bhopal
- Jaipur
- Vishakhapatnam
- Hyderabad
- Nagpur



BRT Transition – Planning to Implementation

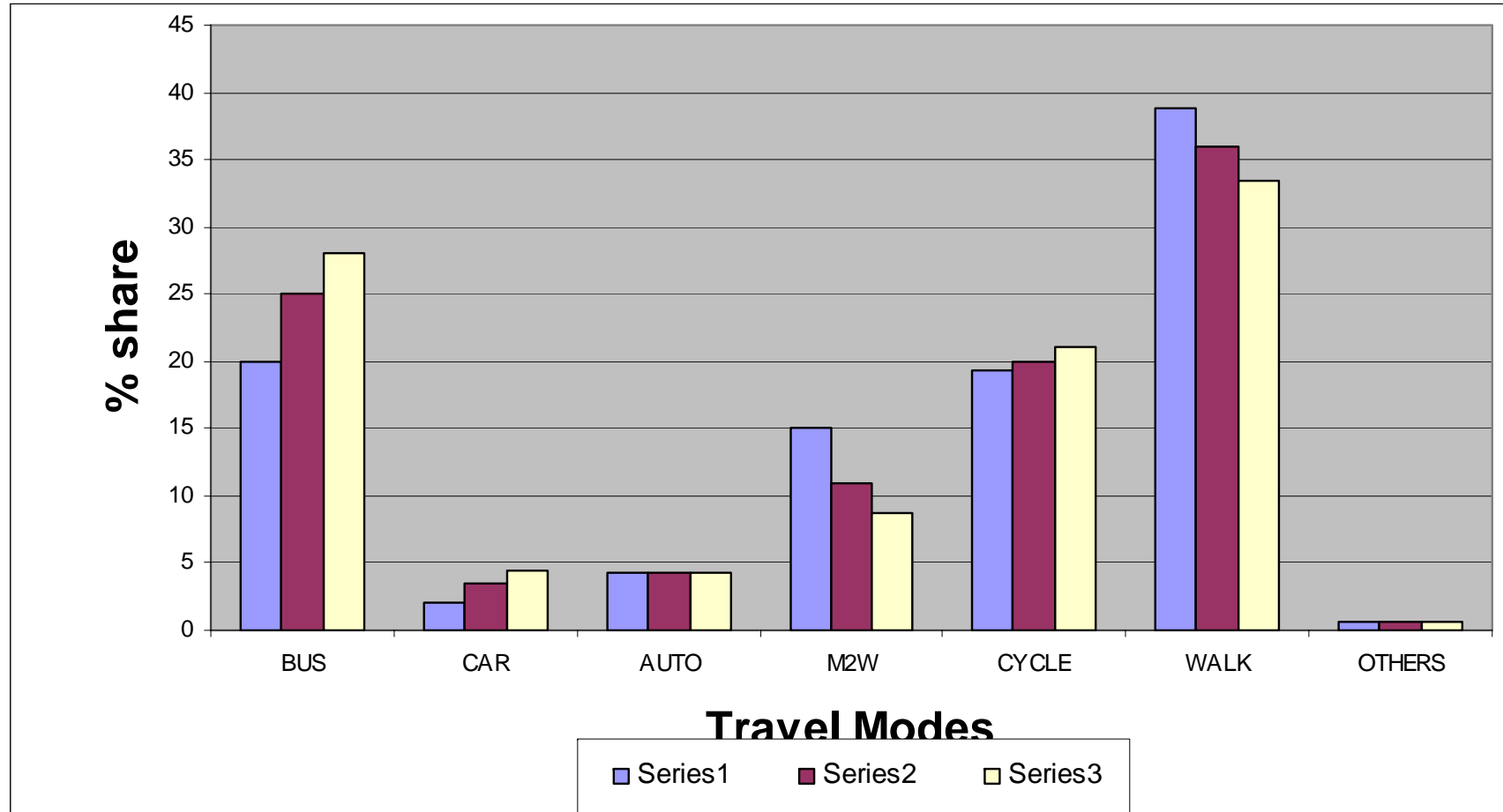
2003-08 Chiragh Delhi



Possible Modal Shifts (excludes captive users)

- Short bus trips (1-6 kms) to bicycles (~ 3% to 5%)
- long two wheeler trips(16-25kms) to buses (reduced two wheelers 29% to 25%) & increased bus 36 to 37%)
- 1/3 Short car trips to bicycles (5% to 7%) cars reduce from 28% to 26%)
- 1/3 short MTW trips to bicycles (7% to 9%) MTW reduces from 25% to 22%

Possible Modal Shifts



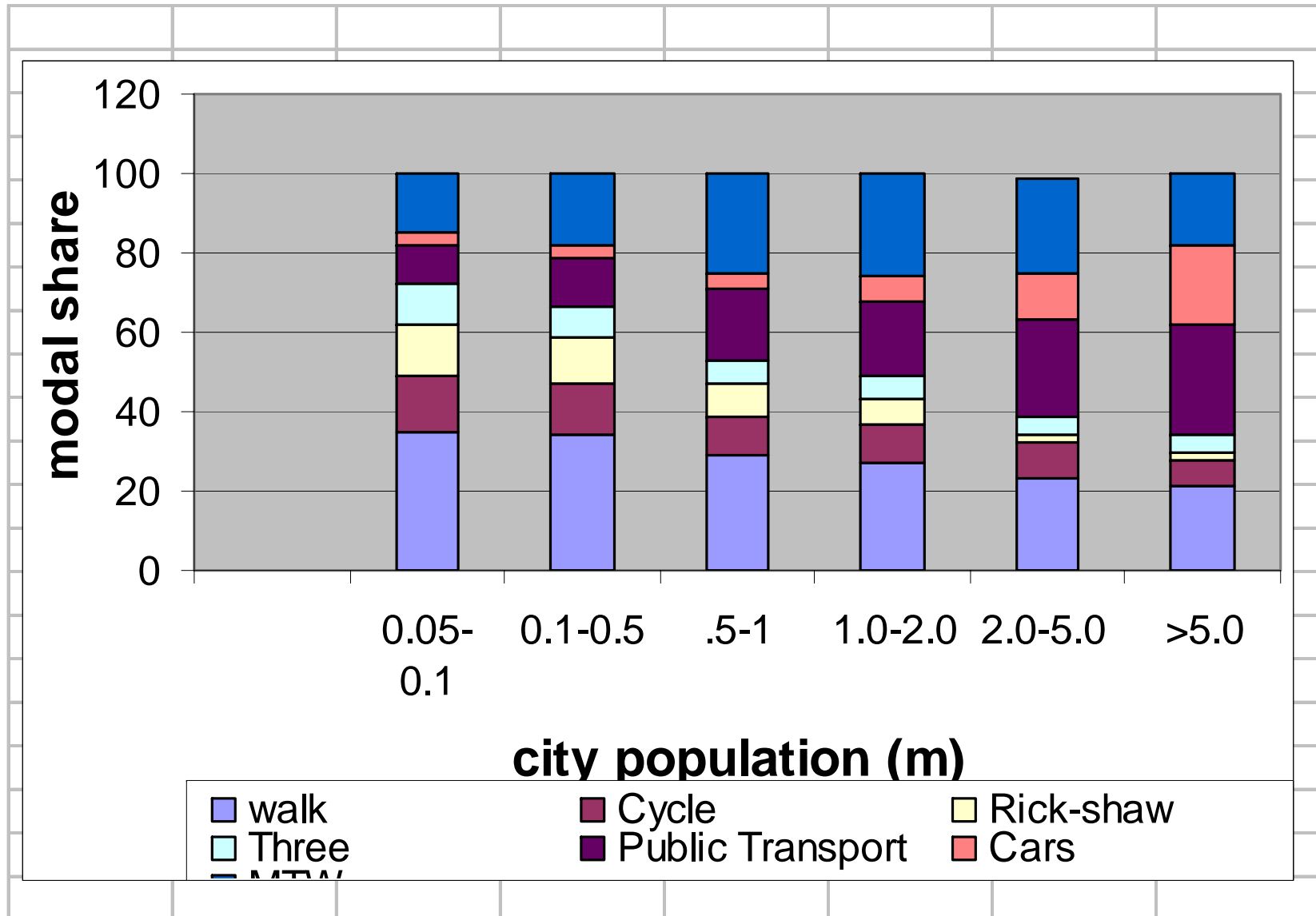
Bus: up from 20 to 28, car: 2 to 5, cycle: 18 to 22; MTW & walking down

BRT/NMV Status in Indian Cities (JNURM Funding approved)

- **Delhi 6 Km completed , 120km planned**
- **Pune 6 Km completed, 90 km planned**
- Ahemdabad 18Km under construction
- Indore 12 kms. Under construction
- Bhopal 22 km under construction
- Jaipur 18 km under construction
- Kota 20 km under construction
- Vishakhapatnam 18 km
- Hyderabad 17 km phase I DPR under preparation
- Nagpur 20 km phase I DPR under preparation

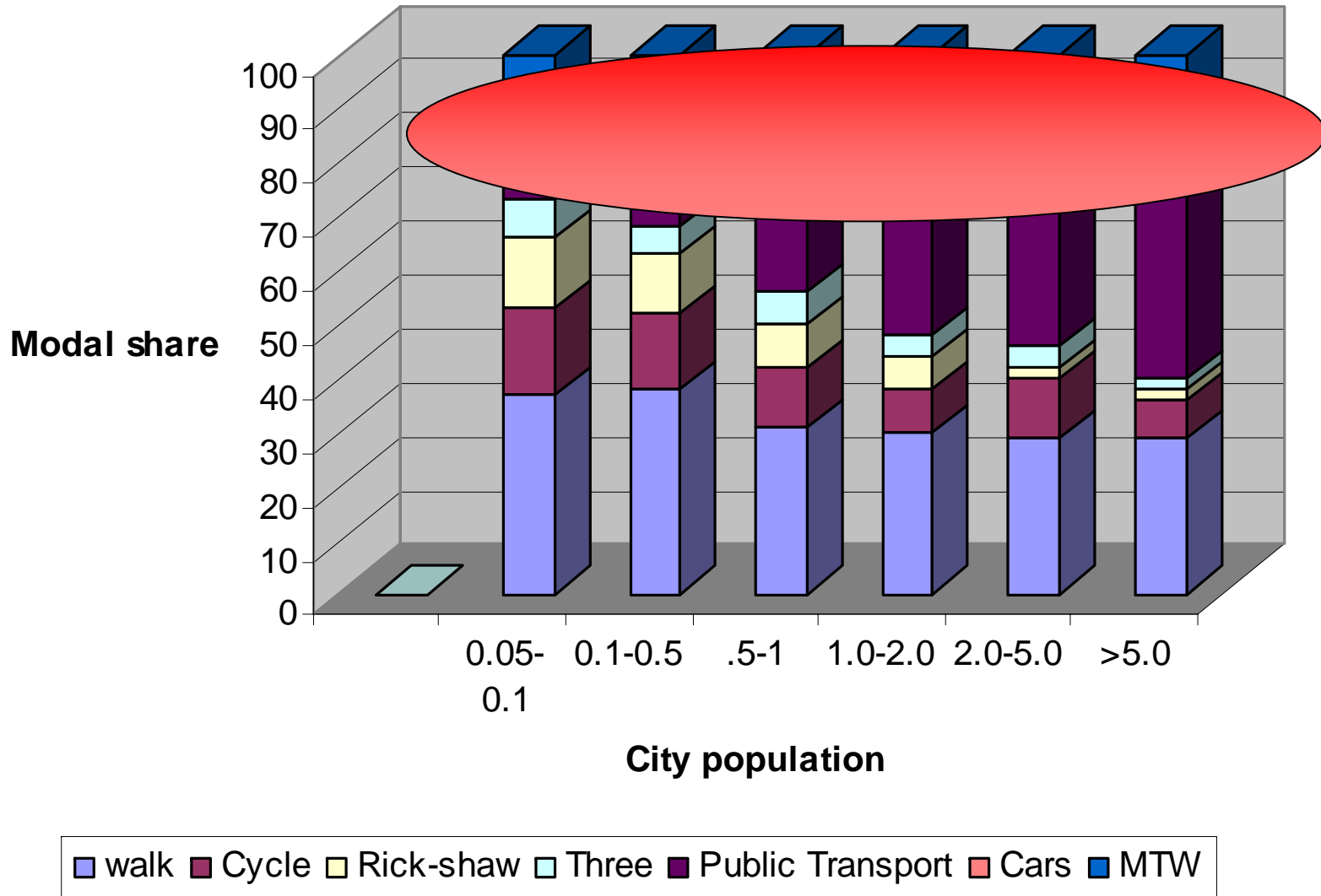
Urban Mobility(BUA)

PT and NMV based, MTW majority personal vehicles



Urban Mobility

PT and NMV based, MTW majority personal vehicles



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Probable Scenario

- Population 1.13 bn(2006),
~ (1.5-1.7) bn(2040)
- GDP growing @ 9%/yr difficult to sustain for 30 years
- Urbanization 30%(2006), ~ 40% (2040)
- Intercity travel will increase; road 4-5 times, rail 2-3 times
- **Urban Transport; MTW+car (20%-50%)**

Challenges

- Transport industry
 - Capital intensive vs complex details
- International stakeholders
 - Car industry