

OPINION

Relevant for: Indian Economy | Topic: Infrastructure: Urbanisation and related Issues

Traffic congestion has increased dramatically in India. Congestion and the associated slow urban mobility can have a huge adverse impact on both the quality of life and the economy. Are all cities in India congested or just some of them? Are Delhi and Mumbai less or more congested than, say, Patna and Varanasi? Are mobility and congestion different within cities across the centre and periphery, and at different times of the day? How congested are Indian cities compared to cities in the US? What does the future hold?

Our understanding of the underlying reasons for congestion is still evolving. A popular view is that urbanization leads to ever larger cities and increased rates of motorization. These two features eventually lead to a complete gridlock and congestion. However, economic growth also brings about better travel infrastructure, which facilitates uncongested mobility and increases the pace of urban mobility. Indian cities have experienced both these trends. These changes are taking place at a much faster pace in India than in the UK and the US. Transportation investments constitute the largest component of lending of many global development institutions. A deeper understanding of the interactions between urbanization, urban mobility and congestion will help improve investments in transport and city competitiveness.

Data on urban transportation in India is scarce. In the UK and the US, knowledge on urban mobility and congestion stems from surveys of household travel behaviour. However, such surveys are prohibitively expensive to carry out in India. We used other methods to examine urban mobility and congestion. We used a popular web mapping and transportation service to generate information for more than 22 million trips across 154 large Indian cities (*Mobility and congestion in urban India* by Aman Prottoy Akbar, Victor Couture, Gilles Duranton, Ejaz Ghani and Adam Storeygard, 2018, World Bank).

Hard data shows that mobility is slow in most Indian cities. It is slow even outside the peak hours of traffic, and in both large and small cities. India's mean travel speed across cities is just 24.4 km per hour, much slower than the mean travel speed of 38.5 km per hour in metropolitan cities in the US. There are also big differences in mobility across cities in India. A factor of nearly two separates the fastest and slowest cities. These differences are driven by the differences in uncongested mobility, and not by differences in how congested they are.

Time does make some difference to urban mobility and congestion. The slowest periods in the evening are more than 25% slower than the fastest in the middle of the night. Travel speed starts declining early in the morning and recovers late in the evening. Distance also makes a difference. Longer trips are faster. Trips further away from the city centre are also faster. Congestion really matters close to the city centre, especially in the big cities. Weather characteristics such as rain, humidity, heat, and more windy conditions are associated with higher travel speeds.

The multi-purpose nature of urban transport also impacts urban mobility in India. Roads in cities are multi-purpose public goods, used by various classes of motorized and non-motorized vehicles to travel and park, as well as a wide variety of other users such as street-sellers, children playing and animals. Non-transportation uses of the roadway do slow down motorized vehicles.

The slowest cities in India include the seven largest cities (see Table 1). Which is the slowest city? Kolkata stands out as the most congested and the slowest city in India. Which are the

fastest cities? This list is more heterogeneous (see Table 2). Many are small cities. The fastest is Ranipet in Tamil Nadu. Chandigarh is an exception in the list of fast cities, as it is bigger than the rest, with a population of more than one million. But unlike most Indian cities, Chandigarh is a planned city, characterized by a regular grid pattern laid out by the French architect Le Corbusier.

Policy challenge

Slow urban mobility in India is primarily due to cities being slow all the time, rather than congested at peak hours. However, congestion is not a nationwide problem. It is concentrated near the centre of the largest Indian cities. Given their importance to the Indian economy, these areas with the highest levels of congestion, such as the city centres of Kolkata and Bengaluru, should be the focus of policy efforts to alleviate congestion.

Indian cities do not experience the familiar twin peak congestion pattern experienced in the UK and the US, due to morning and evening commutes. There is almost no distinct morning peak; instead, there is a slow buildup of congestion that often persists until late into the evening. These unique patterns are consistent with Indian roads being multi-purpose public goods that serve a wide variety of use other than motorized transport that slow down travel.

The unique Indian travel patterns imply that country-specific and city-level policies are necessary. Standard policy recommendations such as congestion pricing or other types of travel restrictions may do little to improve mobility. Instead, potentially costly travel infrastructure investments may be the only way to improve uncongested mobility. Better uncongested mobility generally correlates with the process of faster economic growth.

Despite increased congestion, urbanization is associated with higher urban mobility, contrary to the conventional wisdom that urban growth and development condemns developing cities to gridlock. More primary roads and regular grid patterns are associated with faster urban mobility. Investment in urban transport also plays an important role in influencing property prices. Land value taxes have huge potential to scale up urban mobility as well as maximize finance for development.

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