



Playing with the traffic?

Photos by Krihika Srinath



Is India's traffic situation heading for boom or doom? As MALAVIKA NATARAJ reports in the second part of our focus on India, it's a bit of both...

It's 6.15 pm, and rush hour across the major cities in India. All the traffic on Marine Drive in Mumbai has ground to a halt. Dusty and irritable, Mohan Sharma puts his head out of his vehicle to see what the hold up is. He is already an hour late for his daughter's twelfth birthday party, and is nowhere near home. In the falling darkness, all he can see are honking cars, clouds of exhaust fumes and bumper to bumper traffic – with no apparent reason for the congestion.

Mohan is just one among millions of commuters who has fallen victim to the burgeoning traffic situation in India. Across all the metropolitan cities, chaos on the roads has become a part of the daily routine. With over 30 million vehicles registered on Indian roads and a growth rate pegged at 16% year on year, delays in journeys and increased congestion are only the tip of the iceberg.

As middle class incomes swell and the average car per household ratio increases, the multitude of products offered by the automotive industry become natural magnets. Whatever the budget, there is a four-wheeler or a two wheeler on offer and each one is adding to the heterogeneous jumble of vehicles on the roads. So is an overcrowded traffic situation the price to pay for India's booming economy?

Addressing the problem

Although the government is constantly blamed for mismanagement, attempts at finding a solution to this problem have proved to be a considerable challenge. For instance, in the past five years, a number of 'flyovers' have been constructed across the country. While these have brought relief to congestion, the process of building these over-bridges has taken several months, causing severe bottle-necks and increasing overall pollution.

Another case in point is pipe-laying and road repairs. When terrestrial phone and electricity lines are laid, or road repair work is carried out, free movement is immediately constricted. Delays in covering ditches are fre-

quent, leaving the condition of the roads in a deplorable state. Often, public authorities are unable to cut through the red tape in time to prevent the situation from worsening. Where possible, travellers make efforts to find alternative routes to take them to their destination. "As a daily commuter, I try my best to beat the peak hour traffic, to avoid getting caught in two to three hours long traffic jams, which occur almost on a daily basis, says Viraj Kataria, an architect in capital city, Delhi.

The current infrastructure network supports a very basic traffic management system primarily consisting of traffic lights. In the cities, the lights are run on a functional loop system, but in smaller towns traffic signals are still operated manually. In addition, policemen stationed at main crossroads are frequently required to re-direct traffic the right way. These are all expensive problems, compounded by the lack of discipline on roads. Added to the situation on urban roads, Indian inter-urban highways are easily the most dangerous in Asia. The average number of road accidents per every thousand automobiles is 24, with heavy vehicles alone - namely trucks and buses - accounting for over 45 per cent of the accidents. These roads are characterised by the lack of adherence to speed limits and traffic rules, thereby causing an erratic movement of traffic.

With the bright lights of the cities attracting more and more of the rural population each year, the traffic situation is unlikely to abate. However, the solution to controlling and maintaining traffic levels extends beyond the mere implementation of new systems.

Enforcement – a mounting concern

Enforcing traffic rules and regulations has so far been a mammoth task for the government, stretching both budgets and resources. With traffic discipline being virtually absent, it is unlikely that any advanced traffic system would be accepted or respected by road users at this time. In a busy country packed with struggling people, half-hearted efforts to force drivers to read traffic signs have gone unnoticed. When there are over 30



modes of transport on the road at the same time, violating traffic rules becomes inevitable.

Also, enforcement measures are not drafted scientifically. Rather, they are often treated arbitrarily and on a case-by-case basis. A policeman will stop a vehicle from driving the wrong way up a one-way lane on the pretext of enforcing a traffic rule. After some negotiation, the driver placates the policeman with INR500 ... and the driver is free to go. This is the fundamental problem with a traffic management system that leaves too much room for loopholes, thereby making discipline difficult. In addition, the lack of enforcement of traffic rules outside city limits has raised much concern. On highways and in the rural areas, it is rarely evident.

With each Indian state at a different stage of growth, finding the right tool to manage traffic and successfully enforce rules has proved to be a tremendous challenge. Limited by the lack of funds, thus far, the government has now opened its doors to private investment.

With a new source of funding, clearer traffic management strategies can be drawn up. As part of the National Highway Development Program (NHDP), the last few years have witnessed the growth of several public-private partnerships in implementing tolling systems on national highways. In addition, Build-Operate-Transfer road projects to improve the condition of 100,000 km of road have created a significant amount of interest. The recent initiative to build an US\$87m tolled motorway in the Southern city of Bangalore has been a landmark development in urban traffic management.

This privately funded initiative is expected to be followed by a series of plans to introduce improved traffic systems in other Indian cities. European market players have also entered their stakes for the gain. Companies like Siemens, which have already established subsidiaries in India, have begun to run pilot tests of their systems.

Is China doing it better?

Driven by the considerable traffic management potential in India and China, foreign investment is expected to

double by 2009. With both countries at similar stages of development, the comparisons are inevitable.

China, host of the 2008 Olympics, has faced tremendous pressure to address its traffic situation. Under a project funded by the European Union, Chinese and European stakeholders have committed to jointly arriving at a solution. German company Signalbau Huber ITS and Tongji University have developed a traffic control system, DYNAMICS, designed to meet the requirements of Chinese urban areas. This system is expected to reduce output of pollutants by 20-30 per cent by reducing travel time and lowering the number of times vehicles halt. In China's busiest cities, new projects are being launched to collect, analyse and store real-time traffic information across systems.

For companies entering the Indian and Chinese markets simultaneously, traffic applications need to be marketed differently. Although both countries are faced with similar traffic situations, China is technologically more advanced. While China has begun to incorporate electronic tolling systems, manual tolling continues to dominate Indian inter-urban highways.

"If anyone is considering planting any devices on the chaotic variety of vehicles on the roads in India at this time, it will be a nightmare," says K Venugopal, editor of *The Businessline*, a leading business newspaper. "But a facility that permits electronic collection of payment for road usage may provide some value."

The road ahead is far from being smooth and challenges are still at large. For European players now in the Indian market, implementing such a system will indeed prove to be a significant challenge. But market leaders remain optimistic. "India is a huge market for us," affirms Per Ecker, head of marketing at Norwegian tolling company Q-Free.

"We recently signed a joint venture in India and are in the process of liaising with China as well. We expect a slow rate of growth in the first three years – but we are confident that the growth will be tremendous after that. As with all emerging markets, the key to succeeding is to hit the market at the right time." **TH**