

Forget glitzy Shanghai, can namma Bengaluru match up to Xi'an?

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XI'AN vs BENGALURU

	XI'AN	BENGALURU
➤ Population (million)	4.48 (core area)	9.58
➤ GDP of city (billion dollars)	71	83
➤ Per capital income (dollars)	10,905	10,247
➤ Cars (million)	1,044	1.4
➤ Congestion in Central Business District (level reached of capacity of roads in per cent)	90	350
➤ Average commute (km)	3.8	7.09

POLLUTION IN EMISSION OF CARBON DIOXIDE

➤ From households (kg per household)	0.45	0.55
➤ During commuting (kg per trip)	0.28	0.41
➤ Taking the bus (kg per trip)	0.087	0.347
➤ Taking the taxi (kg per trip)	0.382	0.986



The city pales in comparison to the 13th largest city in China in public transport and commuting

At the dawn of the millennium, when the IT revolution was scripting the dreams and aspirations of Bengalureans, the city was getting ready to enter the big league. Bengalureans were promised a city that would mirror some of China's burgeoning metros, particularly, the glitzy Shanghai.

The reality, however, highlights the disparity between what was promised and what was delivered: When it comes to dependence on public transport and commuting, Bengaluru pales in comparison even with Xi'an, the 13th largest city in China. This is the finding of a research project by T.V. Ramachandra of the Indian Institute of Science, who co-ordinated with researchers in Chang'an University in Xi'an as well as from University of Melbourne, Australia.

Long commute

Xi'an and Bengaluru have much in common. Both are among the fastest-growing metros in their countries. Both started as research and development hubs and witnessed massive urbanisation. The car population is similar: Xi'an has one million cars while Bengaluru has 1.4 million light motor vehicles and a further 3 million two-wheelers. Travel within the Central Business District is painful, with average speeds lower than 15 kmph.

However, the similarities end there. Xi'an has a better developed public transport system while planning has ensured that it is a compact city. In contrast, Bengalureans continue to depend on personal vehicles while haphazard planning has put the average commute to work at 7.09 km, nearly twice that of Xi'an (3.8 km).

More importantly, in Xi'an, the top one-fifth of commuters (primarily, those who travel by car and long distances) contribute to 78 per cent of the emissions while in Bengaluru the top 20 per cent contribute 56 per cent. What this implies is that a majority of commuters rely on metro and buses at Xi'an while in Bengaluru, they depend on cars and two-wheelers.

"This is a bad sign, and will not improve until we make our public transport more attractive for commuting," said Mr. Ramachandra. **Bengaluru buses far more polluting** Travelling by bus in Bengaluru contributes more than four times the carbon dioxide emissions than in Xi'an. Though the Chinese city has 3,000 buses more than Bengaluru, the adoption of eco-friendly fuel (CNG, electric) as well as traffic decongestion methods have seen their

emissions drop. The result is that an average trip in a bus in Xi'an results in emission of 0.087 kg of CO₂ while it is nearly 0.3 kg in Bengaluru.

"In Xi'an, dedicated bus lanes see discipline and punctuality. Here, the bus system is unreliable in its timings while roads are so bad that emissions increase. Moreover, buses here run on profit. It becomes easier to travel in groups in autos and cabs rather than take a bus," said Mr. Ramachandra.

While major investment had been made in the bus system there, BMTC's grand plans of procuring CNG, electric buses or even use of bio-diesel fuels had hit financial roadblocks.

Science is needed in planning

Research on commuting and transport systems in Bengaluru is aplenty. But is anyone listening?

T.V. Ramachandra, Associate Faculty at the Centre for Infrastructure, Sustainable Transportation and Urban Planning (CiSTUP) in IISc., says his Chinese collaborators will use the findings of the study for decision-making while the findings will remain unheard in Bengaluru.

"They have managed to get science into decisions about running a city. Here, our politicians don't want science at all," he said.

Bengaluru can learn discipline and punctuality in the transport system from Xi'an. Our Metro and monorail services need to be completed on time to strengthen public transport. The BMTC needs to run people-friendly services

T.V. Ramachandra, IISc. researcher